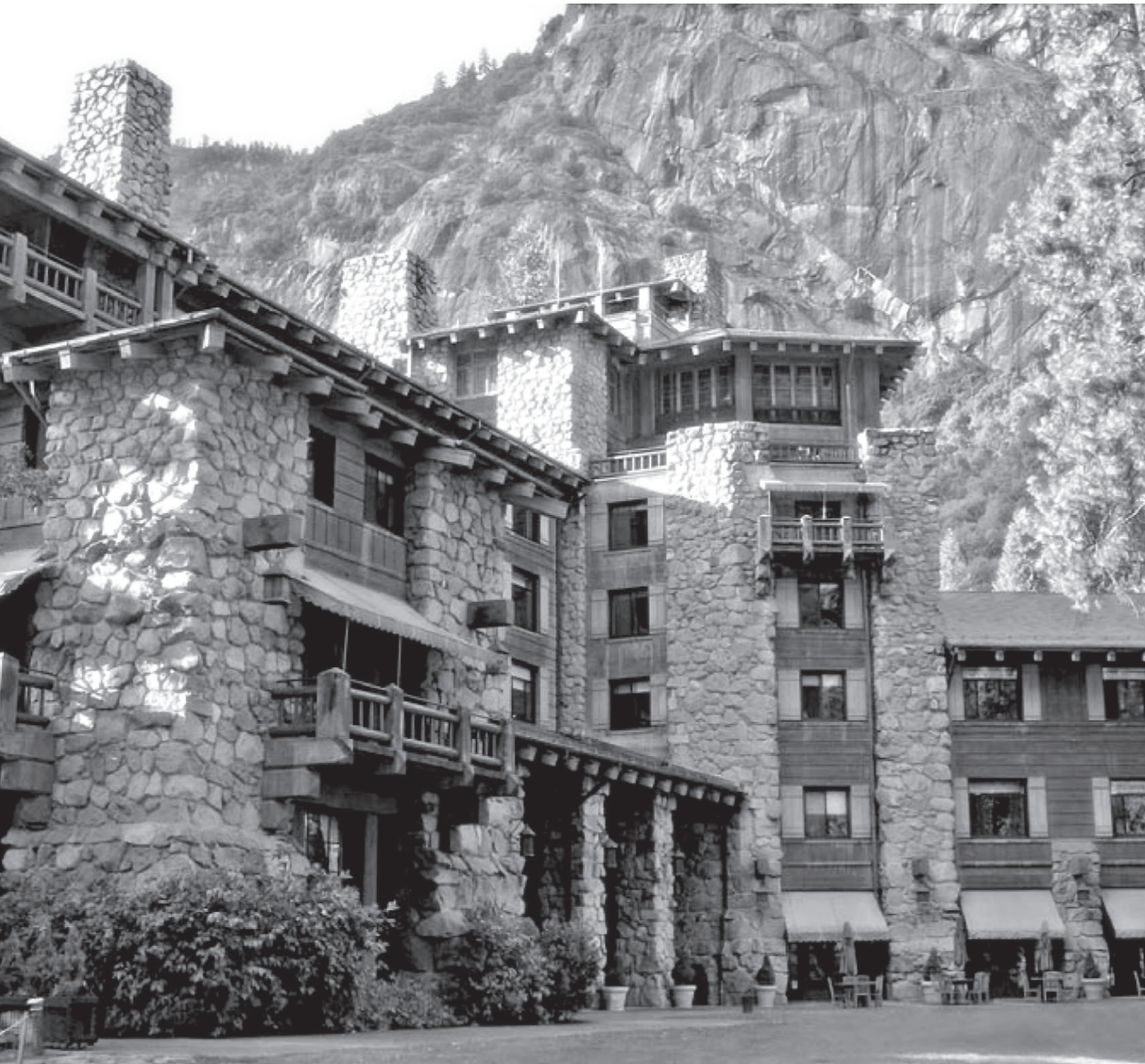




The Ahwahnee Comprehensive Rehabilitation Plan

Environmental Assessment
July 2011



The Ahwahnee Comprehensive Rehabilitation Plan
Environmental Assessment

Yosemite National Park

Lead Agency: National Park Service

ABSTRACT

Constructed in 1927, The Ahwahnee hotel in Yosemite National Park has operated almost continuously to the present day as a luxury hotel in Yosemite Valley. The Ahwahnee was listed on the National Register of Historic Places in 1977 and was designated as a National Historic Landmark in 1987.

Architecturally, The Ahwahnee is a symbol of design excellence, 1920s architectural ideals, and Rustic style architecture on a previously unimagined scale. Historically, The Ahwahnee is significant for its role in the development of tourism, national parks, and the concessions industry and for American citizens' then-emerging appreciation of the national park system and the great outdoors. The Ahwahnee is also historically significant for numerous associations with nationally renowned Americans who made great contributions in the fields of architecture, landscape architecture, government, social history, and recreation.

Although The Ahwahnee generally complied with building standards in effect at the time of construction, after more than 80 years in service, the hotel and associated structures and landscape features require upgrades to meet current fire, seismic safety, health, and accessibility codes and requirements. Obsolete mechanical, electrical, and plumbing systems also are in need of replacement or upgrading. Rehabilitation work is needed to maintain and protect the historic integrity of The Ahwahnee as well as the visitor experience at this National Historic Landmark for future generations.

This document analyzes four alternatives for the comprehensive rehabilitation of The Ahwahnee for public review and comment, in accordance with the National Environmental Policy Act and the National Historic Preservation Act. The No Action Alternative represents continuing the existing operation and management of The Ahwahnee. The three action alternatives represent a reasonable range of options to satisfy the purpose of and need for the project while also meeting all relevant legal requirements.

Following the release of this environmental assessment, there will be a 30-day public comment period. Park staff will be available to answer questions, and written comments will be accepted, at a public meeting to be held within the comment period. Please refer to the project website for the review and comment period and Yosemite National Park open house dates, and to submit comments electronically:

<http://parkplanning.nps.gov/AhwahneeRehab>.

Comments postmarked within the 30-day comment period can also be submitted to:

Mail: Superintendent, Yosemite National Park
Attn: The Ahwahnee Comprehensive Rehabilitation Plan
P.O. Box 577
Yosemite National Park, CA 95389

Fax: (209) 379-1294

To request a printed copy or CD of this environmental assessment (available in limited number), please email: Yose_Planning@nps.gov.

Yosemite National Park

National Park Service
U.S. Department of the Interior



The Ahwahnee Comprehensive Rehabilitation Plan

Environmental Assessment
July 2011

Table of Contents

Executive Summary

Chapter 1: Purpose and Need

Introduction.....	1-1
Background.....	1-2
Purpose of and Need for the Project.....	1-3
Policy and Planning Context	1-5
Public Scoping Process.....	1-12

Chapter 2: Alternatives

Description of the Alternatives.....	2-1
Overview.....	2-1
The No Action Alternative	2-8
Actions Common to All Action Alternatives	2-21
Alternative 1	2-30
Alternative 2	2-37
Alternative 3 (Preferred)	2-46
Actions Considered but Dismissed	2-64
Comparison of the Alternatives	2-66
Identification of the Preferred Alternative	2-73
Environmentally Preferable Alternative.....	2-75

Chapter 3: Affected Environment and Environmental Consequences

Introduction.....	3-1
Organization of this Chapter.....	3-1
Resource Topics Considered in this Environmental Assessment	3-1
Resource Topics Dismissed From Detailed Analysis	3-2
Methods for Analyzing Environmental Consequences	3-3
Cumulative Impacts	3-7
Impairment	3-7
Impact Mitigation Measures.....	3-7
Natural Resources.....	3-8
Geologic Hazards.....	3-8
Soils	3-15
Hydrology	3-21
Vegetation	3-25
Wildlife	3-29
Special Status Species	3-33
Air Quality.....	3-43
Soundscapes.....	3-47
Sociocultural Resources	3-51
Visitor Experience and Services.....	3-51
Facility Operations and Infrastructure	3-61
Socioeconomics	3-73
Energy Consumption and Climate Change.....	3-84
Historic Properties.....	3-87
Historic Sites, Buildings, and Landscapes	3-87
Archeological Resources.....	3-115
American Indian Traditional Cultural Resources	3-122

Chapter 4: Consultation and Coordination

Chapter 5: List of Preparers

Chapter 6: Glossary and Acronyms

Chapter 7: Bibliography

**Appendix A: Programmatic Agreement Regarding The Ahwahnee
Comprehensive Rehabilitation Program**

Appendix B: Selected Schematic Design Drawings of Major Actions

Appendix C: Significance Evaluation and Condition Assessment

Appendix D: Cumulative Plans and Projects

Appendix E: Mitigation Measures Common to all Action Alternatives

Appendix F: Merced Wild and Scenic River Section 7 Determination

Appendix G: Impairment Determination

List of Figures

Figure 1-1	Project vicinity	1-1
Figure 1-2	Photograph of The Ahwahnee hotel, September 1985.....	1-2
Figure 2-1	The Ahwahnee Comprehensive Rehabilitation Plan project area	2-3
Figure 2-2	The Ahwahnee hotel ground floor plan.....	2-5
Figure 2-3	The Ahwahnee hotel first floor (mezzanine) plan	2-5
Figure 2-4	The Ahwahnee hotel second floor plan	2-6
Figure 2-5	The Ahwahnee hotel third floor plan.....	2-6
Figure 2-6	The Ahwahnee hotel upper floor plans	2-7
Figure 2-7	Site Actions Common to All Action Alternatives	2-22
Figure B-1	East Wing egress, Alternatives 1 and 3.....	B-3
Figure B-2	Fire separation at dining room, all Action Alternatives	B-4
Figure B-3	Bracing of dining room to the kitchen, Alternatives 1 and 3.....	B-5
Figure B-4	Limited use/limited access elevator, Alternatives 1 and 3	B-6
Figure B-5	Location of new accessible guestrooms, Alternatives 1 and 3.....	B-7
Figure B-6	Second means of egress from south mezzanine, Alternatives 2 and 3	B-8
Figure B-7	East Wing egress, Alternative 2	B-9
Figure B-8	Bracing of dining room to the kitchen, Alternative 2	B-10
Figure B-9	Limited use/limited access elevator, Alternative 2.....	B-11

List of Tables

Table 2-1	Summary Description of the No Action and Action Alternatives	2-53
Table 2-2	Alternative Options Considered but Dismissed for the Comprehensive Rehabilitation Plan	2-66
Table 2-3	Summary Comparison of Impacts for the No Action and Action Alternatives.....	2-67
Table 2-4	NPS Objectives and Factors Used to Evaluate Project Alternatives	2-73
Table 3-1	Active Regional Faults	3-8
Table 3-2	Native and Ornamental Vegetation in the Project Area.....	3-26
Table 3-3	Special Status Wildlife Species in Yosemite Valley	3-35
Table 3-4	Summary of Previous National Register Nominations for The Ahwahnee	3-88
Table 3-5	Historic Significance Status of Archeological Sites in The Ahwahnee Comprehensive Rehabilitation Plan Project Area	3-115

Executive Summary

Introduction

The National Park Service (NPS) has prepared an environmental assessment identifying and evaluating four alternatives for the comprehensive rehabilitation of The Ahwahnee hotel and its associated structures. This document is intended to meet the requirements of section 102(2) (C) of the National Environmental Policy Act (NEPA) and section 106 of the National Historic Preservation Act (NHPA).

The Ahwahnee hotel is situated at the eastern end of Yosemite Valley, north of the Merced River and at the foot of the Royal Arches rock formation. Completed in 1927, the hotel was designed by architect Gilbert Stanley Underwood for the Yosemite Park and Curry Company. In 1928, a series of eight cottages designed by architect Eldridge (Ted) Spencer were built within an adjacent grove of pines to the east of the main building. Other features within The Ahwahnee developed area include a parking area and a reflecting pond to the north, an employee dormitory to the west, and landscaping designed by Frederick Law Olmstead, Jr.

The Ahwahnee was listed on the National Register of Historic Places in 1977 and was designated a National Historic Landmark in 1987 for its architectural significance and relationship to prominent historical figures. It is considered one of the greatest national park lodges, and it was the last of the lodges to be built to such high levels of artistic significance and achievement.

The Ahwahnee has operated as a luxury hotel almost continuously since it opened in 1927. Although The Ahwahnee generally complied with building standards in effect at the time of construction, after more than 80 years in service, facilities at The Ahwahnee are not fully compliant with current fire protection and building codes, recommended seismic safety practices, and accessibility codes and guidelines. Many of the electrical, plumbing, and mechanical systems are aging and need to be replaced or updated. In addition, some historic hotel finishes and landscape components have deteriorated or have been altered over the years, and are in need of rehabilitation to protect and preserve the historic integrity of this National Historic Landmark.

Purpose and Need

In order to achieve goals and directives set forth in federal law, policy, and guidelines, as well as the 1980 Yosemite National Park *General Management Plan*, the purpose of this project is to develop a comprehensive plan for phased, long-term rehabilitation of The Ahwahnee hotel and its associated structures. Specifically, this comprehensive rehabilitation plan will identify actions to:

- Improve visitor and employee safety by bringing The Ahwahnee into compliance with current building, fire protection, and seismic safety standards;
- Preserve and protect the historic integrity and character-defining features of The Ahwahnee by rehabilitating aged or altered historic finishes;
- Improve hotel energy and water-use efficiency and operations by repairing or replacing outdated or inefficient building systems and components;
- Maintain the traditional level of visitor service and the visitor experience at The Ahwahnee through improved operational efficiency, increased accessibility, and rehabilitation of historic resources.

Several recent studies of facilities at The Ahwahnee have evaluated life-safety and seismic stability compliance and the conditions of structures and grounds. These condition assessments have identified the need for rehabilitation, repair, replacement, and/or improvement of multiple structural, mechanical, electrical, plumbing, circulation, and landscape components, as well as rehabilitation of deteriorated or incompatibly altered historic features and finishes. In addition, opportunities to improve accessibility and operational and energy efficiencies have been identified. A comprehensive rehabilitation program to address the identified code deficiencies, outdated equipment, and threats to historic integrity is needed.

Relationship to Other Plans

The Ahwahnee Comprehensive Rehabilitation Plan Environmental Assessment is informed by the 1980 *General Management Plan*. The goals for The Ahwahnee described in the *General Management Plan*, as amended by the 1992 *Concession Services Plan*, relate primarily to visitor use: retaining the traditional Ahwahnee character and level of service, but removing amenities for outdoor activities that are not directly related to enjoyment of the natural resources.

Overview of the Alternatives

The Ahwahnee Comprehensive Rehabilitation Plan Environmental Assessment describes and analyzes four alternatives.

No Action Alternative

The No Action Alternative is required by the National Environmental Policy Act and NPS Director's Order 12: Conservation Planning, Environmental Impact Analysis and Decision-making, to provide the baseline against which to compare the other alternatives. This alternative assumes that existing conditions at The Ahwahnee would continue. Actions to address code compliance, protect resources, or enhance operations and visitor experience are included in the action alternatives, but are not considered part of the No Action Alternative for the purposes of this assessment.

Alternative 1

Alternative 1 would meet the fundamental objectives of the comprehensive rehabilitation program with minimally invasive measures. This alternative would rely on code waivers and operational management wherever possible to meet project goals. Alternative 1 would maintain current program spaces to the extent practicable, for both operational efficiency and to improve visitor experience, while meeting minimum safety code requirements.

Alternative 1 also proposes historic rehabilitation of historic fabric and features throughout the hotel and cottages that are rated in *The Ahwahnee Historic Structures Report* (ARG 2011) as being in "poor" condition, and historic fabric and features rated as being in "fair" condition in the "significant" and "very significant" spaces. The energy efficiency elements of this alternative would implement measures that affect the building and historic fabric only where other work is occurring or where there otherwise would be no impact on the historic resource.

Alternative 2

Alternative 2 would address fire and life-safety, seismic, structural, and accessibility code and standard deficiencies using more substantive code compliance, and would exceed the basic seismic safety requirements for federal buildings while providing a higher degree of historic rehabilitation and operational improvements than Alternative 1. Alternative 2 would also reorganize the space program in areas already affected by proposed actions to facilitate best operational practices. The visitor experience would be substantially improved as well with designs that are compatible with the historic character of the spaces affected.

Like Alternative 1, Alternative 2 proposes historic rehabilitation of features throughout the hotel and cottages that are rated in *The Ahwahnee Historic Structures Report* (ARG 2011) as being in “poor” condition, but in addition includes rehabilitation and preservation of historic fabric and features in “fair” condition in spaces that are considered historically “very significant” and “significant.” In addition, Alternative 2 includes implementation of non-maintenance treatment recommendations from *The Ahwahnee Historic Structures Report* (ARG 2011) in “contributing” and “historic utilitarian” spaces.

An additional goal of Alternative 2 is to improve energy and water-use efficiency by using measures that would have minimal impact on the building and site.

Alternative 3 (Preferred)

Alternative 3, the NPS preferred alternative, comprises actions selected from either or both of Alternative 1 and Alternative 2, or developed separately. The overall goals of the alternative are to provide the most cost-efficient means of addressing fire, seismic, life-safety, health, and accessibility code and standard deficiencies; improving obsolete building systems and operational efficiency; and improving visitor experience while minimizing impacts on historic fabric and features to the maximum extent practicable.

Like Alternative 1, Alternative 3 proposes historic rehabilitation of features throughout the hotel and cottages that are rated in *The Ahwahnee Historic Structures Report* (ARG 2011) as being in “poor” condition, but in addition includes rehabilitation and preservation of historic fabric and features in “fair” condition in spaces that are considered historically “very significant” and “significant.”

Environmental Analysis

Chapter 3 of this document presents the Affected Environment and the Environmental Consequences for The Ahwahnee Comprehensive Rehabilitation Plan Environmental Assessment, which fulfills the requirements of the National Environmental Policy Act and the National Historic Preservation Act. The Affected Environment section under each resource topic discussed in Chapter 3 describes the existing conditions of the resource in areas that would be affected by the project. The Environmental Consequences section under each resource topic discussed in Chapter 3 analyzes the potential environmental effects associated with each of the alternatives described in Chapter 2. Table 2-1 in Chapter 2 presents a summary comparison of the Environmental Consequences of each alternative.

Environmentally Preferable Alternative

The Council on Environmental Quality (CEQ) regulations implementing NEPA and the National Park Service NEPA guidelines require that “the alternative or alternatives which were considered to be environmentally preferable” be identified (CEQ Regulations, section 1505.2).

Environmentally preferable is defined as “the alternative that will promote the national environmental policy as expressed in NEPA section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources” (CEQ 1981).

Upon full consideration of the elements of section 101 of NEPA, Alternative 3 represents the environmentally preferable alternative for The Ahwahnee Comprehensive Rehabilitation Plan. This conclusion is analyzed in detail in Chapter 2.

Consultation and Coordination Process

Public scoping was initiated for The Ahwahnee Comprehensive Rehabilitation Plan Environmental Assessment on August 13, 2009. The National Park Service accepted public scoping comments through September 26, 2009. The park received eight comment letters from seven individuals and one organization during the public scoping period. These letters generated 21 individual concern statements that were incorporated into a Public Scoping Concerns Report, which was used to guide the development of project alternatives. The 2009 *Public Scoping Concerns Report* prepared for The Ahwahnee Comprehensive Rehabilitation Plan, as well as copies of the original comments, can be reviewed online at: http://www.nps.gov/yose/parkmgmt/ahwahnee_rehab.htm.

Internal scoping and consultation with other government agencies and culturally associated American Indian tribes and groups informed the planning process.

The public outreach called for in NHPA section 106 was integrated with the NEPA process described above, in accordance with the *Programmatic Agreement Among the National Park Service at Yosemite, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Planning, Design, Construction, Operations, and Maintenance, Yosemite National Park, California* (1999 Programmatic Agreement) (NPS 1999) and the *Programmatic Agreement Between the National Park Service, Yosemite National Park and the California State Historic Preservation Officer Regarding The Ahwahnee Hotel National Historic Landmark Comprehensive Rehabilitation Program, Mariposa County, California* (2011 Programmatic Agreement) (NPS and SHPO 2011). In addition, the 2011 Programmatic Agreement was released for public review in January 2011.

Chapter 1: Purpose and Need

Introduction

The National Park Service has prepared an environmental assessment identifying and evaluating four alternatives for the comprehensive rehabilitation of The Ahwahnee hotel and its associated structures and grounds in Yosemite Valley within Yosemite National Park, California (Figure 1-1). After more than 80 years in service, the hotel is in need of rehabilitation and repair in order to assure the public health, safety, and welfare of visitors and employees, and to make certain that the facility remains open and operational for future overnight guests and day visitors to experience.

This environmental assessment is intended to meet the requirements of the National Environmental Policy Act and the implementing regulations promulgated by the Council on Environmental Quality, and also to meet the requirements of section 106 of the National Historic Preservation Act.

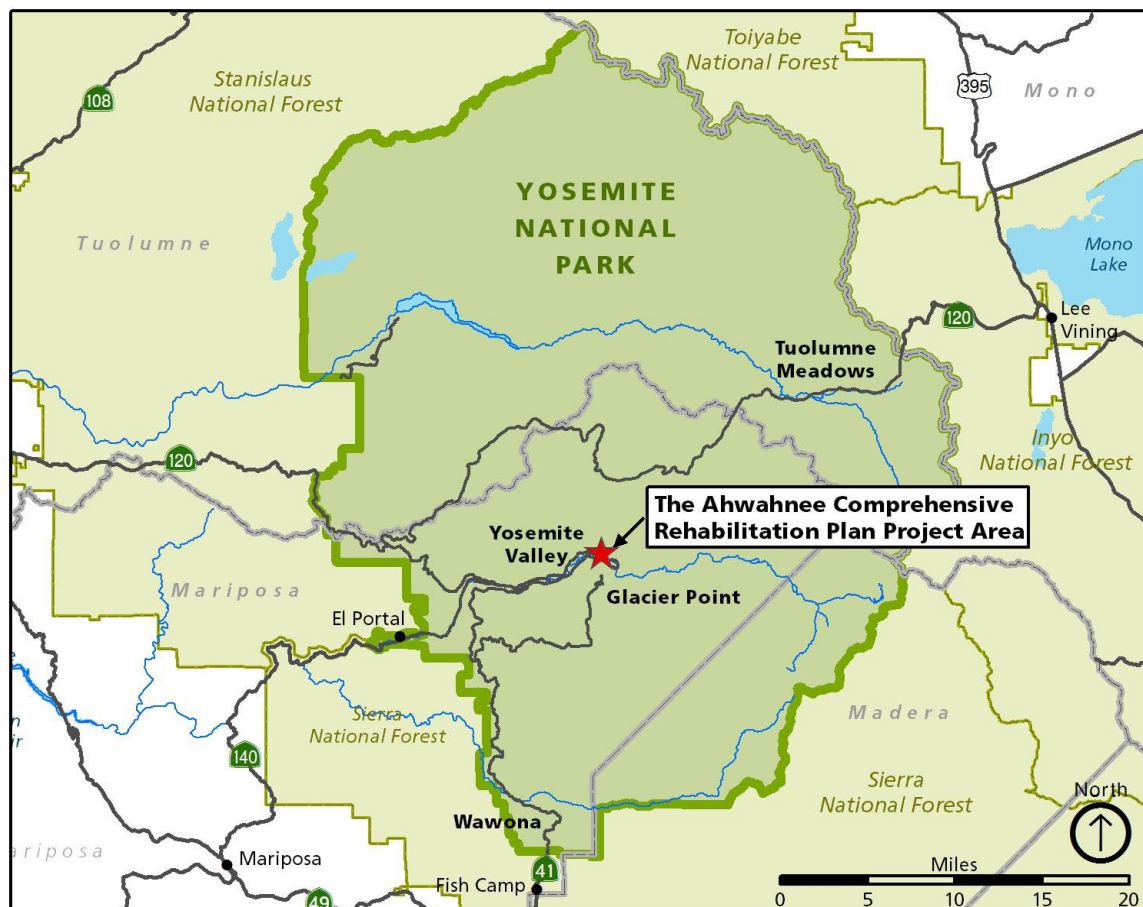


Figure 1-1 Project vicinity

Background

The Ahwahnee hotel was envisioned by Stephen T. Mather, the first Director of the National Park Service, as a grand hotel providing luxury accommodations to attract wealthy and influential visitors to Yosemite Valley. The hotel was designed by architect Gilbert Stanley Underwood for the Yosemite Park and Curry Company, and construction was completed in 1927. In 1928, eight cottages designed by architect Eldridge (Ted) Spencer were built within an adjacent grove of pines to the east of the main building. Other features within The Ahwahnee developed area include a parking area to the north, an employee dormitory to the west, and landscaping designed by Frederick Law Olmstead, Jr.

The Ahwahnee is situated at the eastern end of Yosemite Valley with outstanding views of natural features, including Half Dome, Yosemite Falls, and Glacier Point. Its siting below the Royal Arches rock formation is integral to its design and expression (Figure 1-2).



Figure 1-2 Photograph of The Ahwahnee hotel, September 1985
NPS Photo

With the solid massing of a rock pile buttressed by flared stone piers, the seven-story structure was designed to reflect the surrounding natural conditions and the raw resources of the Sierra. Within the context of the development of the National Park Service Rustic architectural style, The Ahwahnee exemplifies the philosophy of melding the built environment into a natural setting on a grand scale, with deference to the landscape.

The Ahwahnee hotel was listed on the National Register of Historic Places in 1977 and was designated a National Historic Landmark in 1987. The Ahwahnee is a symbol of design excellence, 1920s architectural ideals, and Rustic style architecture on a previously unimagined scale. Historically, The Ahwahnee is significant for its role in the development of tourism, national parks, the concessions industry, and in the then-emerging appreciation of American citizens for the national park system and the great outdoors. The Ahwahnee is also historically important for numerous associations with nationally renowned Americans who made great contributions in the fields of architecture, landscape architecture, government, social history, and recreation.

In its early years, The Ahwahnee was an exclusive destination that catered to distinguished and affluent guests. Over time, the hotel achieved international fame for its architecture and setting amidst the natural beauty of Yosemite National Park, and the hotel continued to host national and international dignitaries throughout much of the 20th century. During World War II, The Ahwahnee buildings and grounds were converted for use by the U.S. Navy as a convalescent hospital from 1943 to 1945. Rehabilitation and restoration of the hotel exterior and the interior finishes, and re-furnishing the hotel began after the Navy left in 1945. For the next 25 years, the property was maintained, some fire safety improvements were implemented, and amenities such as a swimming pool were added to meet changing guest expectations.

In 1977, a restoration and refurbishment program began that was “designed to assure the continued elegance, comfort, and historical accuracy of the Yosemite landmark for years to come,” (Yosemite Park and Curry Company 1979). Both interior and exterior issues were addressed under this program, including restoration of the building’s concrete rafters, balconies, and wooden outriggers. Other major undertakings to improve facilities, systems, roofing, and guestrooms continued throughout the 1980s. In 1993, a change in contracting resulted in the federal government assuming ownership of concessioner-operated buildings in Yosemite National Park. Since 1993, there have been code upgrades and various building improvements, including re-roofing projects, remodeling of certain guestrooms for improved accessibility, mechanical upgrades, and the continued refurbishment of guestroom interiors in the cottages and throughout the hotel.

Today, The Ahwahnee is a NPS-owned and concessioner-operated luxury hotel that provides year-round visitor accommodations, dining, special events, and retail sales. It remains one of the more regularly visited attractions by both day and overnight visitors to the park.

However, after more than 80 years in service with periodic upgrades and repairs, facilities at The Ahwahnee are not fully compliant with current fire protection and building codes, recommended seismic safety practices, and accessibility codes and guidelines. Many of the electrical, plumbing, and mechanical systems are aging and need to be replaced or updated. In addition, some historic hotel finishes and landscape components have deteriorated or been altered over the years, potentially affecting the historic integrity of this National Historic Landmark. A comprehensive rehabilitation program is needed to address numerous code deficiencies, outdated equipment, and conditions that may impact the historic integrity of the site.

Purpose of and Need for the Project

Purpose of the Project

In order to achieve goals and directives set forth in federal law, policy, and guidelines, as well as the 1980 *General Management Plan* and the 1992 *Concession Services Plan*, this project will develop a comprehensive plan for phased, long-term rehabilitation of The Ahwahnee hotel and its associated structures. Specifically, this comprehensive rehabilitation plan will identify actions to:

- Improve visitor and employee safety by bringing The Ahwahnee into compliance with current building, fire protection, and seismic safety standards;
- Preserve and protect the historic integrity and character-defining features of The Ahwahnee by rehabilitating aged or altered historic finishes;
- Improve hotel energy and water-use efficiency and operations by repairing or replacing outdated or inefficient building systems and components;
- Maintain the traditional level of visitor service and the visitor experience at The Ahwahnee through improved operational efficiency, increased accessibility, and rehabilitation of historic resources.

Need for the Project

Although The Ahwahnee generally complied with building standards in effect at the time of construction, after more than 80 years in service, the hotel and associated structures and landscape features require upgrades to meet current fire, seismic safety, health, and accessibility

codes. Rehabilitation work is needed to maintain and protect the historic integrity of The Ahwahnee as well as the visitor experience at this National Historic Landmark for future generations.

The National Park Service, in partnership with the current park concessioner, Delaware North Companies Parks & Resorts at Yosemite (DNC), has undertaken several studies of The Ahwahnee facilities in recent years to assess the overall code compliance and condition of structures and grounds. The most recent of these studies include:

- *Operational Program for The Ahwahnee Comprehensive Rehabilitation Plan* (Hornberger+Worstell 2010c)
- *The Ahwahnee Hotel Seismic Evaluation and Rehabilitation Alternatives* (Degenkolb Engineers 2010)
- *The Ahwahnee Historic Rehabilitation Program* (Hornberger+Worstell 2011)
- *The Ahwahnee Comprehensive Rehabilitation Plan 50% and 100% Conceptual Design Alternatives* (Hornberger+Worstell 2009, 2010a)
- *The Ahwahnee Historic Structures Report* (Architectural Resources Group [ARG] 2011)
- *The Ahwahnee Cultural Landscape Report* (AECOM and ARG 2011)

These condition assessments and life-safety and seismic stability evaluations, have identified the need for rehabilitation, repair, replacement, and/or improvement of multiple structural, mechanical, electrical, plumbing, circulation, and landscape components, as well as deteriorated or altered historic features and finishes. In addition, opportunities to improve operational, energy, and water-use efficiencies have been identified.

Specifically, the hotel, cottages, and dormitory are not fully compliant with current California Building Code (CBC) (adopted by Yosemite National Park as the governing code for The Ahwahnee Comprehensive Rehabilitation Plan), National Fire Protection Association (NFPA) fire and life-safety consensus code, health code, and Interagency Committee on Seismic Safety and Construction (ICSSC) seismic safety recommended practices. Additionally, structural improvements are needed to ensure visitor and employee safety. Site and building improvements also are needed to improve accessibility for disabled persons to all hotel facilities, in accordance with *Americans with Disabilities Act Accessibility Guidelines* requirements.

In addition, mechanical, plumbing, and electrical components in the hotel and cottages have exceeded their design lives, are inefficient, and/or are not fully code-compliant, and are in need of repair or replacement. Heating and air conditioning system upgrades are needed at the hotel, cottages, and dormitory, and upgraded utility connections between the hotel and cottages, and between the hotel and dormitory, are required. Kitchen and Ahwahnee Bar upgrades also are needed to improve operational efficiency and assure that the traditional level of service is maintained, as required by the park's 1980 *General Management Plan*. Lastly, many historic features and finishes, both exterior and interior, of the main hotel building and the cottages are deteriorating or have been altered, and need repair or rehabilitation to maintain the integrity of this significant cultural resource and to maintain the visitor experience.

Policy and Planning Context

Several established policies and plans provide direction for The Ahwahnee Comprehensive Rehabilitation Plan.

Regulations and Policies

National Park Service Organic Act (Title 16, United States Code [16 USC] sections 1 through 4)

In 1916, the Organic Act established the National Park Service in order to “promote and regulate the use of parks. . .” The stated purpose of national parks is “to conserve the scenery and natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” The Organic Act establishes the management responsibilities of the National Park Service. While Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that park resources and values be left unimpaired. It ensures that park resources and values will continue to exist in a condition that allows future generations to enjoy them. NPS Management Policies provide additional guidance on impairment of park resources and values (NPS 2006a).

1970 National Park Service General Authorities Act (as amended by the 1978 Redwood amendment) (16 USC section 1a)

This act prohibits the National Park Service from allowing any activities that would cause derogation of the values and purposes for which the parks have been established (except as directly and specifically provided by Congress in the enabling legislation for the parks). Parks also adhere to other applicable federal laws and regulations, such as the Endangered Species Act, the National Historic Preservation Act, the Wilderness Act, and the Wild and Scenic Rivers Act. To articulate its responsibilities under these laws and regulations, the National Park Service has established management policies (NPS 2006a) for all units under its stewardship.

National Environmental Policy Act (NEPA) (1969) (42 USC 4341 *et seq.*)

NEPA requires the identification and documentation of the environmental consequences of federal actions. Regulations implementing NEPA are set by the President’s Council on Environmental Quality (CEQ) (Title 40, Code of Federal Regulations [40 CFR] Parts 1500-1508). CEQ regulations establish the requirements and process for agencies to fulfill their obligations under the act. In compliance with NEPA, this environmental assessment will evaluate potential project impacts on the human environment. Compliance with the National Historic Preservation Act (see below) is integrated into the NEPA compliance process, using NHPA criteria for the analysis of impacts on cultural resources. The NEPA process is also used to coordinate compliance with other federal laws, regulations, and orders applicable to this environmental assessment, including but not limited to

- Clean Air Act (as amended) (42 USC 7401 *et seq.*)
- Endangered Species Act (16 USC 1531 *et seq.*)
- Wild and Scenic Rivers Act (16 USC 1271)
- Executive Order 11593: Protection and Enhancement of the Cultural Environment
- Executive Order 13514: Federal Leadership in Environmental, Energy, and Economic Performance

National Historic Preservation Act (NHPA) (1966 as amended) (16 USC 470)

Section 106 of the NHPA directs federal agencies to take into account the effect of any undertaking (a federally funded or assisted project) on historic properties. A "historic property" is any district, building, structure, site, or object, including any resource considered by American Indians to have cultural and religious significance, that is eligible for listing in the National Register of Historic Places because the property is significant at the national, state, or local level in American history, architecture, archeology, engineering, or culture. Section 106 also provides the Advisory Council on Historic Preservation (ACHP) and the State Historic Preservation Officer (SHPO) an opportunity to comment on assessment of effects anticipated from the undertaking. For this project, Yosemite National Park's section 106 review process is governed by the *Programmatic Agreement Between the National Park Service, Yosemite National Park and the California State Historic Preservation Officer Regarding The Ahwahnee Hotel National Historic Landmark Comprehensive Rehabilitation Program, Mariposa County, California* (2011 Programmatic Agreement)(Appendix A) developed in consultation with the SHPO. In compliance with section 106 of the NHPA, this environmental assessment will evaluate potential project effects on historic properties.

Americans with Disabilities Act of 1990 (ADA) (as amended) (42 USC 12101 et seq.)

ADA requires accessibility to places of public accommodation and to commercial facilities by individuals with disabilities. Compliance with ADA requirements is guided by *The Americans with Disability Act Accessibility Guidelines* (ADAAG). While most historic buildings and landscapes were not designed to be readily accessible for people with disabilities, making these properties- and the activities within them- more accessible to people with disabilities is a goal of the National Park Service, as detailed in Director's Order 16A, *Accessibility for Employees and Job Applicants* and Director's Order 42, *Accessibility for Park Visitors*.

Architectural Barriers Act of 1968 (ABA) (as amended) (42 USC 4151 et seq.)

The ABA requires access to facilities designed, built, altered, or leased with federal funds. An Access Board develops and maintains accessibility guidelines under this law. These guidelines serve as the basis for the standards used to enforce the law. Federal agencies are responsible for ensuring compliance with the ABA standards when funding the design, construction, alteration, or leasing of facilities. Compliance with ABA guidelines also is an NPS goal, as detailed in Director's Orders 16A and 42.

The Archeological Resources Protection Act of 1979 (ARPA) (16 USC 470aa- 470ll)

ARPA prohibits unauthorized excavation of archeological sites on federal land and other acts involving cultural resources, and implements a permitting process for excavation of archeological sites on federal or Indian lands (see regulations at 43 CFR 7). ARPA also provides civil and criminal penalties for removal of, or damage to, archeological and cultural resources. The analysis of historic properties included in Chapter 3 complies with ARPA.

The Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (25 USC 3001 et seq.)

NAGPRA provides for the protection and repatriation of Native American human remains and cultural items and requires notification of the relevant Native American tribe(s) upon accidental discovery of cultural items (see implementing regulations at 43 CFR 10). Resources covered by NAGPRA may be present within the project area; if they are encountered during project

implementation, these resources would be managed in accordance with the 2011 Programmatic Agreement (Appendix A).

The American Indian Religious Freedom Act of 1978 (AIRFA) (as amended) (42 USC 1996)

AIRFA preserves for American Indians and other indigenous groups the right to express traditional religious practices, including access to sites under federal jurisdiction. Access to American Indian traditional religious practice sites in the project area is provided for in the 2011 Programmatic Agreement.

Executive Order No. 13007: Indian Sacred Sites

Executive Order 13007 directs federal agencies with statutory or administrative responsibility for the management of federal lands, to the extent practicable, to accommodate access to and ceremonial use of Indian sacred sites by American Indian religious practitioners and to avoid adversely affecting the physical integrity of such sacred sites. For this project, the 2011 Programmatic Agreement (Appendix A) would apply with respect to government-to-government consultation and the respect given to American Indian spiritual places and access for activities at The Ahwahnee.

Secretary of the Interior's Standards for the Treatment of Historic Properties (Standards)

The Standards are prepared under the authority of NHPA sections 101(f) (g), and (h), and NHPA section 110. The Standards are intended to promote responsible preservation practices that help protect irreplaceable cultural resources. The Standards are not intended to make decisions about which features of a historic building should be saved and which can be changed. Rather, once a treatment is selected, the Standards provide guidance for consistency in the proposed work.

The four treatment approaches are Preservation, Rehabilitation, Restoration, and Reconstruction. Preservation places a high premium on the retention of all historic fabric through conservation, maintenance, and repair. Rehabilitation emphasizes the retention and repair of historic materials, but more latitude is provided for replacement because it is assumed the property is more deteriorated prior to work. Restoration focuses on the retention of materials from the most significant time in a property's history, while permitting the removal of materials from other periods. Reconstruction establishes limited opportunities to re-create a non-surviving site, landscape, building, structure, or object in all new materials. The proposed project is considered a rehabilitation effort (AECOM and ARG 2011, ARG 2011).

2006 National Park Service Management Policies

Management Policies 2006 is the service-wide policy document of the National Park Service. The following excerpts from the Management Policies specifically pertain to The Ahwahnee Comprehensive Rehabilitation Plan. NPS Management Policies state:

The National Park Service will employ the most effective concepts, techniques, and equipment to protect cultural resources against theft, fire, vandalism, overuse, deterioration, environmental impacts, and other threats without compromising the integrity of the resources" (NPS 2006a, Chapter 5).

The National Park Service will provide persons with disabilities the highest feasible level of physical access to historic properties that is reasonable, consistent with the preservation of each property's significant historical features. Access modifications

for persons with disabilities will be designed and installed to least affect the features of a property that contribute to its significance. (NPS 2006a, Chapter 5).

The National Park Service will provide visitor and administrative facilities that are necessary, appropriate, and consistent with the conservation of park resources and values. Facilities will be harmonious with park resources, compatible with natural processes, esthetically pleasing, functional, energy and water efficient, cost-effective, universally designed, and as welcoming as possible to all segments of the population. NPS facilities and operations will demonstrate environmental leadership by incorporating sustainable practices to the maximum extent practicable in planning, design, siting, construction, and maintenance (NPS 2006a, Chapter 9).

Through the use of concession contracts or commercial use authorizations, the National Park Service will provide commercial visitor services that are necessary and appropriate for public use and enjoyment. Concession operations will be consistent to the highest practicable degree with the preservation and conservation of resources and values of the park unit. Concession operations will demonstrate sound environmental management and stewardship (NPS 2006a, Chapter 10).

National Park Service Director's Orders

The proposed action is consistent with, but not limited to, the following NPS Director's Orders:

- Director's Order 12: Conservation Planning, Environmental Impact Analysis and Decision-making
- Director's Order 16A: Accessibility for Employees and Job Applicants
- Director's Order 28: Cultural Resource Management
- Director's Order 42: Accessibility for Visitors with Disabilities in National Park Service Programs and Services
- Director's Order 50B: Occupational Safety and Health Program
- Director's Order 58: Structural Fire Management

Applicable Codes and Standards

National Fire Protection Association Codes

Per NPS *Director's Order 58: Structural Fire Management* (DO-58), the National Park Service has adopted the current version of the National Fire Protection Association (NFPA) codes and standards as recommended practices for fire prevention, protection, and life-safety. Codes applicable to this project include NFPA 1-Fire Prevention, NFPA-101 Life Safety Code, and NFPA 914-Code for Fire Protection of Historic Structures. DO-58 recognizes that NPS-adopted standards may sometimes conflict with state or local codes; in these cases, the National Park Service will defer to the most stringent requirement. For this project, fire and life-safety provisions are generally per the applicable portions of NFPA 101.

2007 California Building Code (CBC) (Health and Safety Code of 18950, et seq.) and (Title 24, Part 2, California Code of Regulations)

The California Building Code is based directly on the 2006 International Building Code (IBC), but the 2007 CBC adds special provisions for seismic design and accessibility to the 2006 IBC. For this project, the CBC is used for occupancy classification, determination of construction types and the related height and areas allowed by those building codes. Fire and life-safety provisions would generally be per the applicable portions of NFPA code (see above).

2007 California Historical Building Code (CHBC) (Health and Safety Code of 18950, *et seq.*) and (Title 24, Part 8, California Code of Regulations)

While the 2007 California Building Code (above) makes provisions for the special treatment of qualified historic buildings (CBC, section 3403.5), the 2007 California Historical Building Code amplifies and codifies this protection. The CHBC governs all other statutes or regulations as they may apply to qualified historic buildings; thus, it modifies the CBC. The CHBC endorses a case-by-case approach to find and adopt reasonable alternatives or reasonable levels of equivalency for situations where strict compliance with established statutes or regulations would negatively affect a historic resource. For this project, application of the CHBC affected alternatives for meeting accessibility standards, seismic design, and design of mechanical, electrical, and plumbing systems.

Interagency Committee on Seismic Safety and Construction Recommended Practice 6: Standard of Seismic Safety for Existing Federally Owned and Leased Buildings (ICSSC RP6)

ICSSC RP6 was developed in conjunction with the National Institute of Standards and Technology in response to Public Law 101-614 and pursuant to Executive Order 12941. RP6 identifies the triggers for when seismic rehabilitation of federal buildings is required and provides evaluation and mitigation requirements. Per section 2.1(b), because this project has the potential to “significantly extend the building's useful life through alterations or repairs which total more than 30% of the replacement value of the facility,” a seismic evaluation and rehabilitation following the provisions of RP6 are required.

RP6 cites Federal Emergency Management Agency (FEMA) standards 310 and 356, which have since been superseded by *American Society of Civil Engineers (ACSE) 31-03: Seismic Evaluation of Existing Buildings* and *ASCE 41-06: Seismic Rehabilitation of Existing Buildings*. The above are referenced from the 2007 CBC, and therefore may be modified by the CHBC.

For this project, a seismic evaluation of The Ahwahnee hotel, cottages, and dormitory (Degenkolb Engineers 2010) was used to develop alternative options for meeting seismic standards.

Accessibility Codes

The governing accessibility standards and codes for this project are:

- *Americans with Disabilities Act Accessibility Guidelines*, current version as incorporated into:
- The 2007 CBC, Chapters 11A and 11B, as modified by:
- The 2007 CHBC

Mechanical, Electrical, and Plumbing Codes

For this project, the California Mechanical Code (CMC) and the California Plumbing Code (CPC) are used in conjunction with the 2007 CBC, for systems design code standards. This includes the California Title 24 standards for energy use and conservation. This project also applies the 2007 California Electrical Code, which is based on the 2005 National Electric Code (NEC).

Park Plans and Guidelines

The purpose of and need for The Ahwahnee Comprehensive Rehabilitation Plan must be, to a large degree, consistent with existing park planning documents. Documents that pertain to this rehabilitation planning effort include the following:

1980 Yosemite National Park General Management Plan

The goals for The Ahwahnee area described in the *General Management Plan* all relate to visitor use: to retain the traditional Ahwahnee character and level of service, but remove outdoor activities that are not directly related to the natural resources. The *General Management Plan* calls for the following specific actions related to The Ahwahnee:

- Retain the 99 Ahwahnee hotel rooms and 22 (original) cabin rooms
- Retain the dining room, gift shop, bar, and other services
- Retain 132-car parking area
- Remove the tennis courts
- Remove the golf course

1992 Concessions Services Plan

The *Concessions Services Plan/SEIS* presented guidance for management of concession services in Yosemite National Park to meet *General Management Plan* goals. The *Concession Services Plan* amended the *General Management Plan*. The *Concession Services Plan* is consistent with the *General Management Plan* regarding actions at The Ahwahnee, with the following additions:

The number of rooms at The Ahwahnee would remain at the number available in 1991: 99 rooms in the hotel and 24 rooms in cottages (two cabin living rooms were converted to guestrooms in the time between the publication of the 1980 *General Management Plan* and the 1992 *Concessions Services Plan*).

2011 Ahwahnee Comprehensive Rehabilitation Plan Programmatic Agreement

Given the long-term nature of The Ahwahnee Comprehensive Rehabilitation Plan and the potential for adverse effect on the historic property from some of the needed code-driven actions, the National Park Service at Yosemite National Park and the California SHPO developed a programmatic agreement in accordance with 36 CFR Part 800.14(b). Culturally associated California Indian tribes and groups have been invited to participate in the programmatic agreement as concurring parties. The programmatic agreement, a standard, technical document under the National Historic Preservation Act, is used to clarify roles, responsibilities, and expectations of consulting parties engaged in large and complex federal projects that may have an impact on historic properties. The programmatic agreement documents the terms and conditions agreed upon during consultation to resolve the adverse effect.

The *Programmatic Agreement Between the National Park Service, Yosemite National Park and the California State Historic Preservation Officer Regarding The Ahwahnee Hotel National Historic Landmark Comprehensive Rehabilitation Program, Mariposa County, California* (2011 Programmatic Agreement) was executed in January 2011, and is included as Appendix A of this environmental assessment.

Merced River Comprehensive Management Plan Settlement Agreement

The Merced River was designated a wild and scenic river in 1987. The Ahwahnee developed area, including the hotel, parking and service areas, the employee dormitory, guest cottages, and grounds are located within the Merced Wild and Scenic River corridor boundary. To meet its resource management obligations under the Wild and Scenic Rivers Act, the National Park Service initiated a comprehensive river management planning process for the Merced Wild and Scenic River corridor in 1999. The subsequent Merced River Plan (2000) and Revised Merced River Plan (2005) were legally challenged, and both were rescinded. An outstanding lawsuit against the National Park Service in response to these plans was settled, and a legally binding Settlement Agreement was executed between National Park Service and former plaintiffs in September 2009 (see <http://www.nps.gov/yose/parkmgmt/upload/mrpsettlementagreement.pdf>).

The Settlement Agreement renewed efforts to complete a comprehensive management plan that will satisfy the requirements of the Wild and Scenic Rivers Act. Until such time a comprehensive management plan is completed and the Record of Decision for the plan is signed, the Settlement Agreement constrains actions that may be undertaken in much of Yosemite Valley, and therefore limits certain potential rehabilitation actions within The Ahwahnee developed area, particularly with respect to rehabilitation of features in the cultural landscape that are unrelated to the health and safety of visitors and employees, or accessibility.

For this reason, rehabilitation of the historic cultural landscape at The Ahwahnee is largely deferred to future site planning efforts, pending finalization of the comprehensive management plan for the Merced Wild and Scenic River.

Per section E (pages 14-16) of the September 2009 Settlement Agreement, upon completion of the appropriate environmental review and compliance, within the Merced Wild and Scenic River corridor the National Park Service:

...may conduct operations and maintenance activities, correct accessibility deficiencies, and carry out all other activities necessary to address the daily, routine, and intermittent operational requirements of Yosemite National Park, as long as such operations and activities will not influence or predetermine the NPS analysis of user capacity, including the types, levels, and location of uses, and are in full compliance with NEPA.

The following stipulations as agreed to within section E of the Settlement Agreement particularly affected the scope of this planning effort:

The NPS will not construct new roads, parking spaces, or bridges; NPS will not increase the number of overnight lodging accommodations; and the NPS will not pave any parking areas or trails that are currently unpaved. . . Routine operations, maintenance projects, and emergency responses are intended to stabilize and protect park facilities, address visitor health and safety issues, and protect natural and cultural resources. . . NPS is aware that correcting certain accessibility deficiencies is required to ensure that park visitors with disabilities have access to the opportunities and experiences in Yosemite National Park. Examples of repair work required to correct accessibility deficiencies include: reconfiguring existing facility paths of travel in developed areas; modifications to restrooms and fixtures; providing accessible routes, signage and information; and installation of required hardware and equipment.

Public Scoping Process

Public scoping was initiated for The Ahwahnee Comprehensive Rehabilitation Plan Environmental Assessment on August 13, 2009. A 45-day scoping period extended through September 26, 2009. The scoping period was subsequently extended through September 30, 2009, to accept comments that may have been submitted at the Yosemite National Park Public Open House held in September. Two public meetings were held for this project: a Park Public Open House at the East Auditorium in Yosemite Valley on August 26, 2009, and a public scoping meeting at The Ahwahnee on September 22, 2009. In addition, a public meeting was held at The Ahwahnee on September 8, 2009, and the project was featured at a Park Public Open House on September 30, 2009, at the East Auditorium in Yosemite Valley. Project materials were displayed and comments were accepted at each meeting.

Written public scoping comments were received at public scoping meetings, and by fax, email, U.S. mail, and online through the Planning, Environment, and Public Comment (PEPC) website (<http://parkplanning.nps.gov>). During the scoping period, eight comment letters were received, seven from individuals, and one from an organization. These letters generated 21 individual concern statements. The concern statements were categorized and considered for incorporation in the planning process. The *Public Scoping Concerns Report* prepared for The Ahwahnee Comprehensive Rehabilitation Plan, as well as copies of the original comments, can be reviewed online at http://www.nps.gov/yose/parkmgmt/ahwahnee_rehab.htm. Internal scoping and consultation with the California SHPO and other government agencies and with California Indian communities also informed the planning process. See Chapter 4, Consultation and Coordination, for more information on consultation procedures.

Issues and Concerns Addressed in this Document

The following issues were identified during the public scoping process:

- Maintain the historic integrity of the hotel
- Use native plants for landscape restoration
- Address the relationship of this project to the Merced Wild and Scenic River Comprehensive Management Plan planning process

Issues and Concerns Not Addressed in this Document

The following issues were identified during public scoping and are not addressed in this planning effort for the following reasons:

- **Remove the tennis courts.** This comprehensive rehabilitation plan does not include actions in the cultural landscape outside of code-driven emergency fire department access, utility upgrades, and ADA accessibility. Removal of the tennis courts is not addressed in this plan as it is unrelated to the purpose of and need for comprehensive rehabilitation at The Ahwahnee, as described above.
- **Address parking issues at The Ahwahnee.** Per the 2009 Settlement Agreement (see above), this comprehensive rehabilitation plan does not address parking spaces at The Ahwahnee other than to evaluate alternatives for accessible parking as required by code.
- **Remove trees to restore scenic views and vistas.** This comprehensive rehabilitation plan does not include actions in the cultural landscape outside of code-driven emergency access, utility upgrades, and ADA accessibility. Clearing of vegetation to restore scenic vistas is guided by the parkwide *Scenic Vista Management Plan*, which was released to the public for review in the fall

of 2010, and will provide a systematic program for documenting, protecting, and reestablishing Yosemite's important viewpoints and vistas. A decision document for the *Scenic Vista Management Plan* is expected in 2011.

In addition, four public scoping letters without substantive comments were submitted for consideration. These letters contain comments that did not provide enough information to be put in context, or were anecdotes about experiences related to The Ahwahnee. All comments received during the scoping period have been duly considered and are now part of the administrative record for this project.

THIS PAGE INTENTIONALLY LEFT BLANK

Chapter 2: Alternatives

This chapter describes the No Action Alternative along with three action alternatives associated with The Ahwahnee Comprehensive Rehabilitation Plan, Actions Common to All Action Alternatives, alternatives considered but dismissed, a summarized comparison of the environmental consequences of each alternative, and identification of the environmentally preferable alternative.

Description of the Alternatives

Overview

The National Park Service has developed a no-action and three action alternatives that address the project purpose and need as described in Chapter 1, using the results of internal and public scoping and agency consultation, and the findings and recommendations of studies conducted in support of this project, including:

- Critical items identified in the *Operational Program for The Ahwahnee Comprehensive Rehabilitation Plan* (Hornberger+Worstell 2010c)
- *The Ahwahnee Hotel Seismic Evaluation and Rehabilitation Alternatives* (Degenkolb Engineers 2010)
- *The Ahwahnee Historic Rehabilitation Program* (Hornberger+Worstell 2011)
- *The Ahwahnee Historic Structures Report* (Architectural Resources Group [ARG]2011)
- *The Ahwahnee Cultural Landscape Report* (AECOM and ARG 2011)
- *The Ahwahnee Comprehensive Rehabilitation Plan 50% and 100% Conceptual Design Alternatives* (Hornberger+Worstell 2009, 2010a)
- *The Ahwahnee Comprehensive Rehabilitation Plan 50% Schematic Design Alternatives* (Hornberger+Worstell 2010b)

In addition, please see Chapter 1, ‘Applicable Codes and Standards’ (pages 1-8 and 1-9), for a list of codes and standards that were used to develop the needed actions included with each alternative.

To facilitate description of the no-action and action alternatives, the purpose and need objectives in Chapter 1 have been refined into seven (7) program categories, as follows:

- Fire /Life-Safety Compliance
- Seismic Safety Recommended Practice and Structural Strengthening
- Accessibility Compliance
- Historic Rehabilitation
- Operational Efficiency
- Visitor Experience and Visitor Services
- Energy/Water-Use Efficiency and Sustainability

Each of the action alternatives addresses the seven program categories above with actions that respond to building and site code deficiencies and rehabilitates character-defining features and spaces of the historic structures. The action alternatives also improve operational and energy and

water-use efficiencies in order to provide a sustainable level of service into the future for both overnight and daytime visitors. Actions that are common to all of the action alternatives are presented in an ‘Actions Common to All Action Alternatives’ section, following the description of the No Action Alternative.

An overview of the comprehensive rehabilitation plan project area is provided as Figure 2-1. Reference drawings for each floor of The Ahwahnee hotel are provided as Figures 2-2 to 2-6.

The Ahwahnee Comprehensive Rehabilitation Plan Project Area

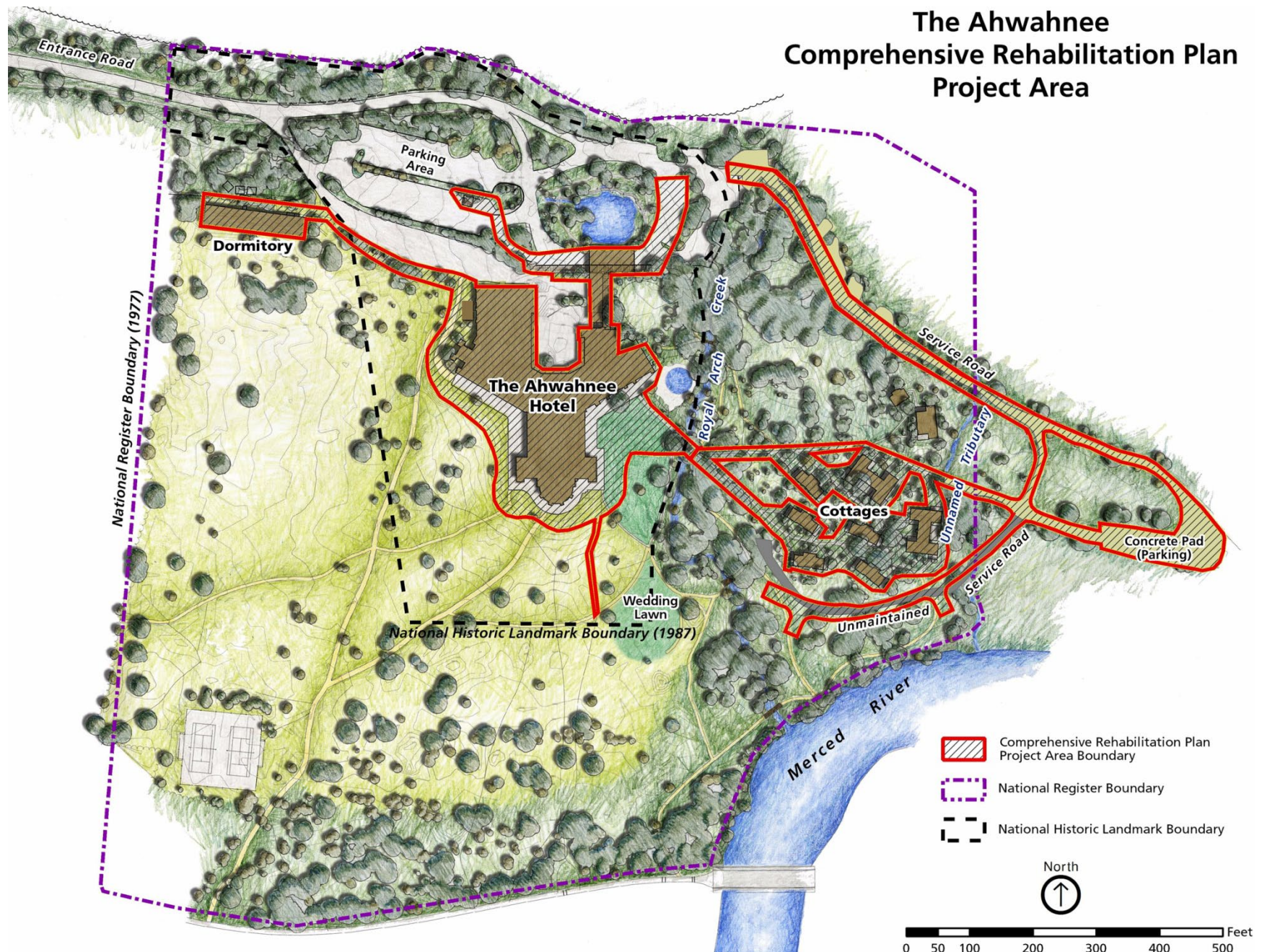


Figure 2-1 The Ahwahnee Comprehensive Rehabilitation Plan project area

THIS PAGE INTENTIONALLY LEFT BLANK

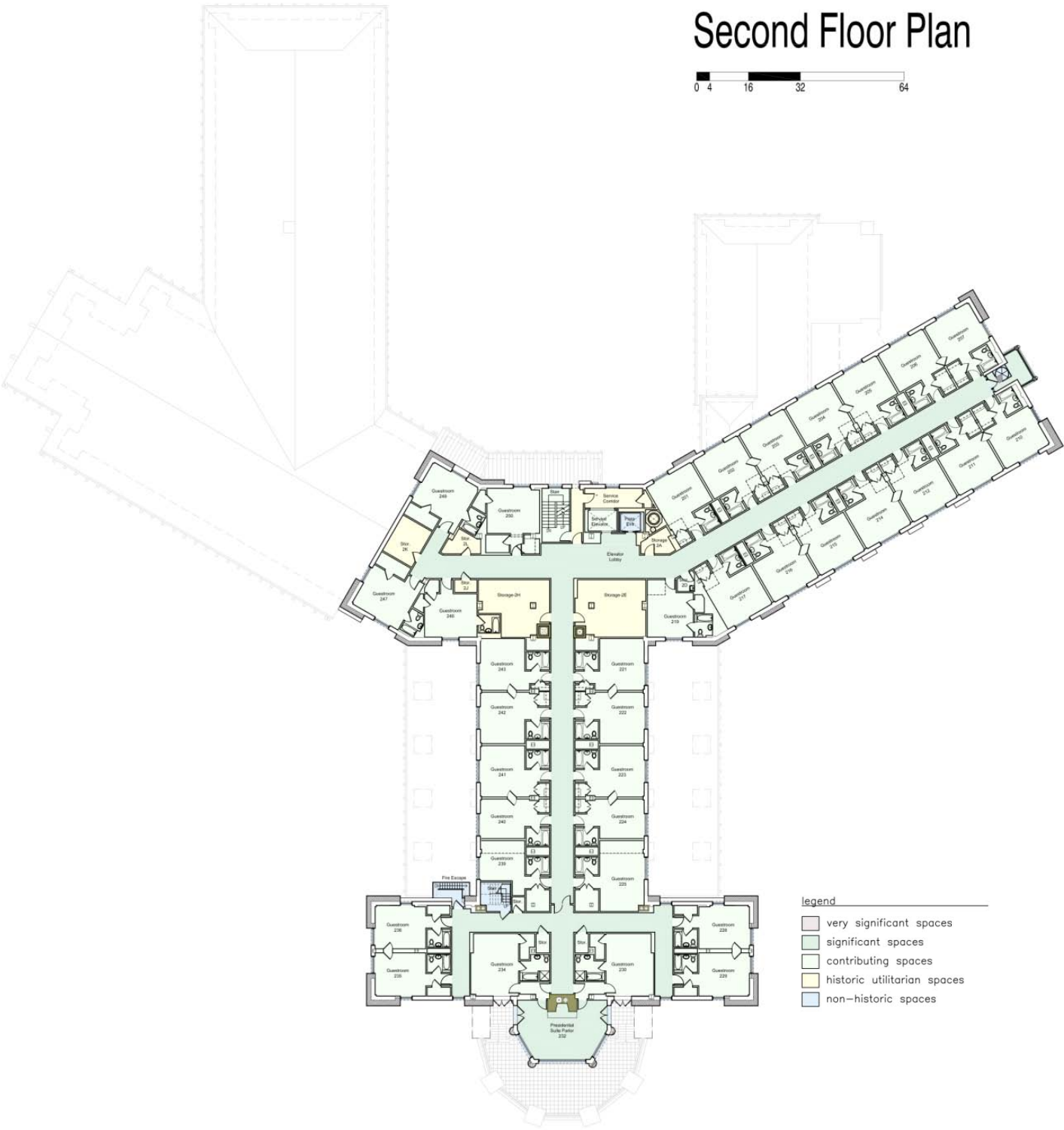


Figure 2-4 The Ahwahnee hotel second floor plan

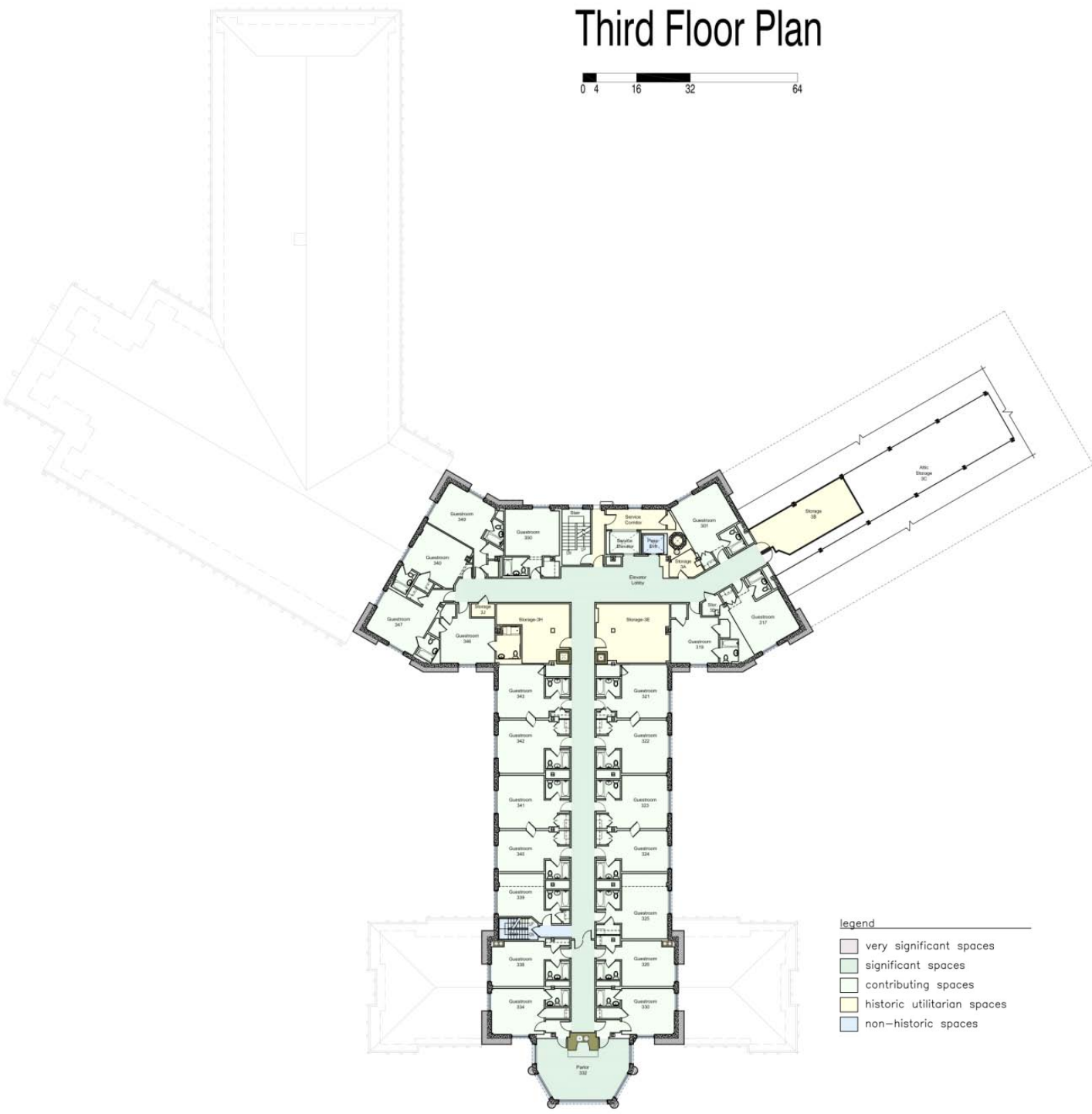
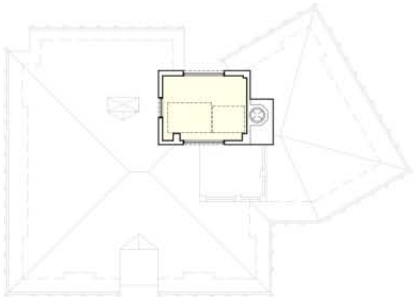


Figure 2-5 The Ahwahnee hotel third floor plan

Upper Floor Plans



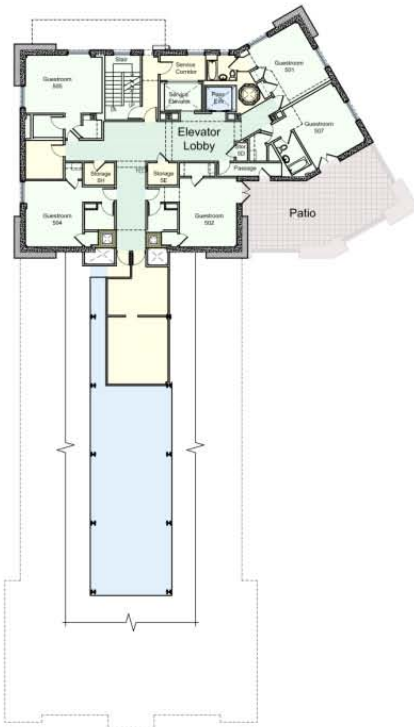
Sixth Floor Plan



Penthouse Plan



Fourth Floor Plan



Fifth Floor Plan

Figure 2-6 The Ahwahnee hotel upper floor plans

The No Action Alternative

Overview

The No Action Alternative is required by the National Environmental Policy Act and NPS Director's Order 12 to provide the baseline against which to compare the other alternatives. This alternative assumes that existing conditions at The Ahwahnee would continue, including routine maintenance and repairs. Any additional management to address code compliance, protect resources, or enhance operations and visitor experience is addressed as part of the action alternatives, but is not considered part of the No Action Alternative for the purposes of this assessment.

The following is a summary of existing conditions at The Ahwahnee hotel and its associated structures in regard to the seven purpose and need elements listed above.

Fire/Life-Safety Compliance

As noted under Chapter 1, fire and life-safety requirements are governed by the current version of the National Fire Protection Association (NFPA) codes and standards as recommended practices for fire prevention, protection, and life-safety.

There is a substantial ongoing maintenance and inspection program for fire and life-safety at The Ahwahnee. As part of this program, the National Park Service recently implemented the 2010-2011 Fire/Life-Safety Project and the 5th and 6th Floor Egress Project at The Ahwahnee hotel to address critical code compliance issues in the main hotel building. The improvements included the installation of a comprehensive fire and smoke detection and alarm system, smoke barriers, an expanded automatic fire suppression system throughout the building, and the addition of a secondary means of code-compliant egress from the 5th and 6th floors to the ground level.

With the fire/life-safety improvements described above, the following fire/life-safety deficiencies would still exist under the No Action Alternative:

Egress

Fire code requires that at least two means of egress be provided from any balcony, mezzanine, story or portion thereof. Currently, the South Mezzanine meeting rooms (Tresidder Lounge, Colonial Room, and Tudor Room) have only one means of egress. The Yosemite National Park Fire Marshal has advised that, effective March 2011, these meeting rooms no longer may be used for public assembly without an acceptable secondary means of egress.

In the East Wing, the existing exterior spiral stair fire escape from first and second floor guestrooms to the ground floor does not comply with width or capacity requirements in current fire code.

Fire/Smoke Separation

The Dining Room does not conform to fire code requirements for occupancy and construction type separation. The Dining Room is an assembly occupancy and Type 4 construction (heavy timber, combustible). The remainder of the hotel building, with the exception of the Porte Cochere and walkway, is a hotel occupancy and Type 1B construction (steel and concrete, non-

combustible). No fire separation between the two areas would be provided under the No Action Alternative.

Elevators

The existing service elevator, passenger elevator, and the elevator shaft separation present the following fire/life-safety hazards: the shafts are constructed of unreinforced gypsum block; the pocketed entrances compromise the shaft fire resistance; the wood service cab is not accessible or fire-resistant; and the controls do not conform to current fire safety code.

Structural Fire Protection in Attic Spaces

Areas of the existing fire proofing applied to the exposed steel in the attic spaces (primarily above guestrooms) have delaminated, been damaged, or are discontinuous. These conditions would persist under the No Action Alternative.



Deteriorated condition of fireproofing at column/beam in the hotel attic space.
Hornberger + Worstell Photo

Shafts and Linen Facilities

The existing building shafts are not compliant with current code pertaining to fire rating, floor penetrations, and duct penetrations.

The linen chute shaft currently terminates without any enclosure in the soiled linen room and does not include any fire separation from the public space. A two-hour rating system is required to comply with fire code.

The toilet exhaust systems for the guestrooms do not comply with fire code, as the associated shafts are not properly sealed at the top and bottom and are open to each guestroom.

Fire Department Access

Master Key System

The National Park Service recently re-keyed doors throughout The Ahwahnee hotel building as part of the 2010-2011 fire/life-safety project described above. Currently, emergency personnel need several master keys to access different portions of the hotel.

Fire Department Access Roads

The existing fire department access road at the south and east sides of the hotel and the existing fire department access road to the cottages do not comply with fire code. Specifically, fire code requires the following:

- Provide a fire department access road within 50 feet of at least one exterior door of each building that can be opened from the outside and that provides access to the interior of the building;
- Provide a fire department access road within 150 feet of any portion of a facility or any portion of an exterior wall of the first story of a building;
- Provide a minimum of 16 feet of road width, not including shoulders, walkways or drainage;
- Provide a road surface that can support a live load of 75,000 lbs but shall support no less than vehicles weighing 60,000 lbs, and that can be maintained year-round;

- Provide drainage crossings that are all-weather, where emergency vehicles are not subject to passing through water, ice, or soft roadbed;
- Provide and maintain at least 13.5-foot nominal vertical clearance over the full width of the access road;
- Provide a turnaround at the closed end of fire access roads with dead ends exceeding 300 feet.

The existing fire truck access to the hotel utilizes a combination of the parking area on the north side of the hotel, a hardened landscape area (covered with turf) surrounding the hotel to the west and south; and a reinforced section of the concrete terrace on the west side of the hotel (see Figure 2-7). This vehicle access on the west and south side of the hotel is not an approved route as it does not conform to required road widths or required distance from the structure for fire truck access. It also does not meet the load requirements for fire vehicle access throughout its full length. Lastly, there is no turnaround where the access terminates on the southeast side of the hotel.

The existing fire department access road from the parking area to the cottages varies in width from approximately 9 to 20 feet. Under the No Action Alternative, the majority of the cottages would remain more than 50 feet from a fire department access road, and several of the cottages would remain more than 150 feet from the existing fire department access road.

The existing fire access road terminates at the service entrance to the cottages (see Figure 2-7). From this point, an unmaintained service road is the only access provided on the southern side of the cottage area. This unmaintained service road is not compliant with fire code requirements for width, surfacing, drainage crossings, and turnarounds. Additionally, this unmaintained service road provides the only vehicle access to existing fire hydrants on the southern side of the cottages.



Unmaintained service road south of Ahwahnee cottages. Existing fire hydrant at left. *DNC Photo*

Fire Protection Systems

The National Park Service recently installed automatic fire sprinklers, fire/smoke detectors, and fire alarm systems throughout The Ahwahnee hotel building as part of the 2010-2011 fire/life-safety project described above. That project did not include similar measures for The Ahwahnee cottages or dormitory.

Ahwahnee Cottages

The current smoke alarms at the cottages are non-monitored, battery operated, single-station smoke alarms that do not comply with fire code. Under the No Action Alternative, these non-compliant alarms would remain.

Fire alarm systems are not specifically required by fire code for the cottages, as the guestrooms have ground-level exterior exits. However, based on issues encountered during code inspections, a fire alarm system is recommended by the Yosemite National Park fire marshal to provide a reliable means of notifying guests during a smoke condition. Under the No Action Alternative, no fire alarm system would be installed.

There is currently no automatic sprinkler protection for the cottages. An automated sprinkler system is not required by fire code at the cottages; however, sprinklering the cottages would allow for additional distance between the fire access road and the cottages beyond the required code distances for fire road access as described above. Sprinklering also would add a measure of protection for historic materials in the event of fire. Under the No Action Alternative, no sprinklering system would be installed.

Ahwahnee Employee Dormitory

The current smoke alarms at the dormitory are non-monitored, battery-operated, single-station smoke alarms that do not comply with fire code. Under the No Action Alternative, these non-compliant alarms would remain. There is no sprinkler system in the dormitory. Under the No Action Alternative, no sprinklering system would be installed.

Electrical Systems

A number of code-compliance issues have been identified with the existing electrical system at The Ahwahnee hotel. These issues, which would persist under the No Action Alternative, include:

Distribution Panels

The electrical distribution panels are located in two rooms within the hotel. The room containing the main switchgear and generator, located at the rear (north end) of the Kitchen area, is 18 inches below grade. The room containing hotel operations distributions is located in the basement, one floor below grade. Extensive water damage is visible in both of these rooms due to flooding during spring runoff or after heavy rains. This creates a hazardous working environment for maintenance staff.

Grounding and Short-Circuit Protection

The existing electrical system is neither properly grounded nor does it provide proper short-circuit protection.

Wiring, Conduits, and Raceways

Much of the electrical distribution system consists of the original, cloth-wrapped wiring. The insulation is damaged and worn in many places, and does not meet current electrical code. Conduit has corroded in many places and does not meet safety standards. Exposed wiring, and in particular the exposure of electrical systems to water or moisture, poses a hazard to maintenance staff and to electrical systems at the hotel.

Emergency Generator

The existing emergency generator is undersized and beyond its useful life. The generator does not have the code-required standby systems or transfer switches that would allow targeted use of the generator during emergencies.

Electrical Service

Electrical service to the hotel is currently split, with both 208-volt and a 480-volt service provided. This results in redundancies of equipment, and operational inefficiencies.



The Ahwahnee hotel basement, springtime flooding. Hornberger + Worstell Photo

Transformers

The existing electrical transformers are inefficient and approaching the end of their useful lives.

Ventilation and Exhaust Systems

A number of issues have been identified with the existing ventilation and exhaust systems at The Ahwahnee. These issues, which would persist under the No Action Alternative, include:

Guestrooms

There is no mechanical ventilation at the guestrooms, ventilation is achieved through operable windows in each room, the original ventilation system included operable transoms above the corridor doors to facilitate air movement, these transoms have been sealed due to fire code restrictions, and the system does not function as it was originally intended. This natural ventilation has limitations during extreme temperatures, and can contribute to energy inefficiencies when windows are opened while heating or air conditioning units are operating.

Guestroom Corridors

The exhaust system for guestroom corridors is not compliant with fire code, as there is no fire or smoke protection between floors at the exhaust shaft (see also ‘Shafts and Linen Facilities’, above). In addition, the make-up air pathway does not meet building code for ventilation.

Guest Bathrooms

The toilet exhaust systems for the guestrooms do not comply with fire code, as the associated shafts are not properly sealed at the top and bottom and are open to each guestroom (see also ‘Shafts and Linen Facilities’, above).

Electrical Room, Boiler Room, and Elevator Penthouse

The electrical rooms and the elevator penthouse do not have code-compliant cooling or ventilation systems.

Kitchen

The existing hot-water propane boiler for heating the Kitchen make-up air does not comply with manufacturer’s installation recommendations.

Public and Employee Spaces

The hotel’s exhaust systems at public restrooms and the linen rooms and at the dormitory are currently non-compliant.

Seismic Safety Recommended Practice and Structural Strengthening

As noted in Chapter 1, seismic evaluation and structural strengthening requirements are governed by ICSSC RP6, *Seismic Safety for Existing Federally Owned and Leased Buildings*. RP6 requires that existing buildings meet life-safety performance objectives and the Basic Safety Objective. The Basic Safety Objective considers the building's expected seismic performance in two different earthquake events:

- BSE-1 earthquake, which has a 500-year return period or an event with a 10% chance of being exceeded in 50 years. Buildings are required to meet the life-safety performance levels of a BSE-1 earthquake.
- BSE-2 earthquake, which has a 2,500-year return period or a 2% chance of being exceeded in 50 years. The building is only required to meet the collapse prevention performance level when the BSE-2 earthquake occurs.

Due to the continuous development of seismic design standards since the construction of The Ahwahnee hotel and cottages, there are some inherent qualities of the structures that may not meet the above objectives. Specific areas that may be affected by 500-year or 2,500-year earthquakes would include the following:

Dining Room

Due to the lack of a detailed lateral-force resisting system in the wood-framed Dining Room, considerable damage, both structural and nonstructural, may occur in this portion of the hotel when subjected to moderate ground shaking, resulting in a hazard to occupants from falling debris and potentially substantial damage to a Very Significant character-defining feature of the hotel.

The roof of the Dining Room could separate from the adjoining Kitchen and main hotel building core with a gap of approximately 1 to 3 inches, depending on the severity of the event. Granite veneer columns at the west end of the Dining Room could rock independently of one another and the roof, potentially dislodging stones from the top of columns. Stones from the granite veneer on columns at the east end of the dining room also could be dislodged, and pose a falling hazard to occupants. The south window wall could distort, shattering glass windows. In addition, the Dining Room roof lacks sufficient capacity to meet Mariposa County snow loading requirements.



The Ahwahnee hotel kitchen floor from below.
Hornberger + Worstell Photo

Kitchen Floor

The Kitchen floor slab is in poor condition. The concrete slab has deteriorated from water damage, and sections of the slab have spalled from heavily rusted steel reinforcing bars in the crawl space below.

Stone Chimneys

The stone chimneys on the hotel are discontinuous below the roof structure, and the stone chimneys on the cottages are not adequately braced at the roof level. Hazards to visitors and employees from falling stone may occur when subjected to a 500- or 2,500-year earthquake.

South Wing

Two-story gypsum-block walls flanking the Great Lounge fireplaces may fail during a 500- or 2,500-year earthquake due to building drift or accelerations, resulting in falling hazards or blocked egress. Lack of shear walls in the Great Lounge and Solarium may result in damage to floors, windows, and finishes at the intersection of the south wing, east wing, and gift shop, the historic storefront, and decorative stenciling. However, work is not required to meet current codes or standards.

The window walls in the Great Lounge and Solarium would likely be damaged, some glass including Very Significant stained glass windows may shatter, and door frames may become distorted.

Exterior Walls

The existing granite stone veneers may separate from their concrete backing during a 500- or 2,500-year earthquake, resulting in a hazard to occupants from stone falling into egress paths and around the building.

Porte Cochere

The entry walkway and the Porte Cochere are susceptible to damage during a 500- or 2,500-year earthquake, but neither would collapse. Work is not required to meet current seismic standards.

Mechanical, Electrical, and Plumbing Equipment

Unanchored or unbraced equipment, and rigid piping connections, may fail during both the 500- and 2,500-year earthquake, resulting in disrupted hotel operations and potential safety hazards. Work is not required to meet codes or standards.

Accessibility Compliance

As noted under Chapter 1, accessibility requirements are governed by the American with Disabilities Act of 1990 (ADA) and the Architectural Barriers Act of 1968 (ABA), as incorporated into the 2007 California Building Code and the 2007 California Historical Building Code. The ADA requires accessibility to places of public accommodation and commercial facilities by individuals with disabilities. The ABA requires access to facilities designed, built, altered, or leased with federal funds. Under the No Action Alternative, the following features would remain non-compliant with ADA-ABA standards:

Parking and Paths of Travel

There are currently six accessible parking spaces at the hotel. Seven spaces are needed to meet the required ratio of accessible parking spaces to guestrooms. In addition, the existing accessible parking is not in compliance with ADA-ABA requirements for configuration, signage, or markings.

The ADA-ABA also requires an accessible route within the site from accessible parking spaces and accessible passenger loading zones, as well as an accessible route through the building to all public spaces and accessible guestrooms. The pathways through public areas on the ground floor of the hotel are fully accessible, but the arrival path to the main building, the path to the wedding lawn, and the path to the accessible units in the cottages are not fully compliant. The passenger elevator in the core of the main building provides access to the upper floors of The Ahwahnee, with the exception of the meeting rooms at the South Mezzanine. These rooms are not currently

accessible, although similar meeting spaces are available on the fully accessible ground floor (see ‘Mezzanine Meeting Rooms’, below).

Mezzanine Meeting Rooms

The South Mezzanine is comprised of three Very Significant historic rooms (Tresidder Room, Tudor Lounge, and Colonial Room) accessible only by a single stairway. As of March 2011, the Tresidder Room is completely closed to public and business use and cannot be used for any events, due to exceedances of code-mandated travel distance to the sole egress stair. The Tudor Lounge and Colonial Room are closed to public use and limited to business use by park or concessioner staff, for up to 30 people.

Main Entry and Ground Floor Entrances

The main doors at the entrance to the hotel do not have an electronic assist option. In addition, the existing hardware and thresholds at all other ground floor entrances/exits do not comply with ADA-ABA requirements.

Registration Lobby

The existing registration counter and the concierge desk do not comply with current ADA-ABA standards.

Restrooms

The existing public restrooms are located on two levels – the ground floor (men’s restroom) and the North Mezzanine (women’s restroom). One accessible toilet compartment is provided in each of the men’s and women’s restrooms. The unisex (family) restroom adjacent to the women’s room on the North Mezzanine is not fully accessible due to inadequate clearances.

Guestrooms

ADA-ABA guidelines specify the number of accessible guestrooms that must be provided at the hotel. The number required is related to the number of total guestrooms available. For hotels with a total number of guestrooms between 101 and 150, seven accessible guestrooms are required. The Ahwahnee has 99 guestrooms in the main hotel and 24 guestrooms in the cottages, for a total of 123 guestrooms. The main hotel has three accessible guestrooms, and two accessible guestrooms are provided at the cottages.

ADA-ABA also calls for the dispersion of various classes and choices of guestrooms provided with accessibility features. The elements of primary consideration for dispersion include room rate, balcony access, connection to an adjoining room, number of beds per room, and number of rooms per unit (e.g., a suite). The Ahwahnee currently has five accessible guestrooms at varying amenity levels between the hotel and cottages. None of the accessible guestrooms has a balcony or is a suite.

Employee Facilities

Some existing employee facilities and service areas do not comply with ADA-ABA standards. Employee locker rooms provided at the hotel are not accessible, as they are located on the second floor above the gift shop with no elevator access. The route to the breakroom located off the Kitchen is not accessible by all employees. The serving area in the Ahwahnee Bar and the service bar at the main Dining Room are not accessible.

At the North Mezzanine exit stair (near the service elevator), the existing door configuration opens onto a stair, which creates a falling hazard and is not in compliance with ADA-ABA.

Historic Rehabilitation

The Ahwahnee Historic Structures Report (HSR) (ARG 2011), developed in support of this comprehensive rehabilitation plan, includes an extensive evaluation of the condition and significance of The Ahwahnee's exterior and interior spaces and features as related to the hotel's overall historic context and character, and an evaluation of the historic integrity and a condition assessment for each space and feature. The results of these evaluations are included as Appendix C to this environmental assessment.

Each feature and space was accordingly assigned a significance classification (defined in Appendix C): Very Significant, Significant, Contributing, Historic Utilitarian, or Non-Historic. Please see Figures 2-2 through 2-6 for an illustration of the significance classification on each floor of the hotel.

In addition, the historic integrity of spaces and features at The Ahwahnee was rated as follows:

- **High.** Most of the historic materials, function and design are extant and the area or feature portrays the same character and design as it did during the period of significance.
- **Medium.** Many of the character-defining features, historic function, and design are extant, but modifications have reduced the ability of the area or space to convey its historical significance.
- **Low.** Little of the historic materials, function, and design remain, but the area or feature still retains some ability to convey historic significance.
- **None.** The space or feature has been so altered that it no longer conveys historic significance.

The condition of spaces or materials was defined as:

- **Good.** The space or element requires only routine maintenance and cleaning.
- **Fair.** The space or element shows signs of wear and requires minor repairs in addition to routine maintenance and cleaning.
- **Poor.** The space or element is extensively worn and needs major repairs or restoration.

Under the No Action Alternative, the existing condition of spaces and features as detailed in Appendix C would persist with the exception of routine maintenance and cleaning. No preemptive historic rehabilitation work would be performed.

Operational Efficiency

Kitchen Facilities

The existing Kitchen is inadequate to meet current hotel and dining needs in terms of operational layout, efficiency and storage. Work performed to meet seismic safety recommended practice, structural standards, and fire/life-safety code would require reinstallation of kitchen equipment to current building codes, health codes, and federal accessibility standards.

'Back of House' Facilities

The existing 'back of house facilities' (e.g., employee locker rooms, employee break rooms, offices, storage areas, laundry facilities, etc.) are currently not fully compliant with fire and occupational safety code, health code, and ADA-ABA requirements.

Currently, the employee break room is in the Kitchen, which presents a potential for food contamination. In addition, employee locker rooms and the break room are not fully accessible to the mobility impaired.

Porte Cochere

The existing vehicle clearance at the existing Porte Cochere is 11.5 feet. The standard vehicle clearance for charter buses is 13.0 feet. Currently, charter buses load and unload passengers in an unsheltered area in the parking area.

Telecommunication and Electrical Systems (see also 'Fire /Life-Safety - Electrical Systems', above)

The existing main point of entry (MPOE) for the telecommunications services at the hotel is located on the ground floor in a closet of an administrative office. The location of the MPOE is inefficient for service and maintenance, and the closet where it is housed is not of sufficient size.

Electrical systems at The Ahwahnee are obsolete and do not meet current building code. The hotel facilities are powered by a split service with 208-volt and 480-volt lines. Transformers are outdated, and the emergency generator is undersized and lacks required stand-by systems. The generator room's floor is below grade, and subject to flooding from run-off from the service yard. An electrical distribution panel is located in a basement room that frequently floods during spring months, creating a worker safety hazard. Much of the hotel electrical distribution systems consist of obsolete cloth-wrapped wiring, and electrical panels lack proper grounding. The dormitory electrical system also is outdated and would require upgrading to meet fire code and electrical code as part of any future redesign. Power is currently fed from the main switchboard that services the hotel, but metering is not provided for the dormitory.

Mechanical and Plumbing Systems (see also 'Fire /Life-Safety - Mechanical and Plumbing Systems', above)

The existing central mechanical/electrical/plumbing system has a pneumatic control system that does not provide sufficient feedback for troubleshooting or energy management control.

Distribution mains for the domestic hot and cold water piping at the hotel were upgraded in 1990 from galvanized steel to copper, but a large portion of the remaining piping is still galvanized steel and is in poor condition. Pressure-reducing valves are in very poor condition and pressure gauges indicate that existing valves are not functioning.

Heating, Ventilation, and Cooling (HVAC) Systems

HVAC systems throughout the hotel have reached or exceeded their design lifespans and are not energy efficient. HVAC units installed at the cottages are inefficient, temporary units. In addition access for equipment maintenance is inadequate. The system does not allow for discrete areas in the hotel to be shut down independently, which complicates maintenance and repairs and inconveniences guests.

Visitor Experience and Visitor Services

The National Park Service and the park concessioner provide a high level of visitor service and a unique visitor experience at The Ahwahnee hotel. There are, however, elements of visitor service and related visitor experience that have deteriorated due to the age of the structure, modern uses, and altered historic finishes, among other issues. The following conditions would continue to impact visitor services and visitor experience:

Registration Lobby and Arrival Experience

The stained concrete and rubber tile floors in the Registration Lobby are Very Significant character-defining features of the hotel that are in need of rehabilitation. In addition, as noted above under ‘Accessibility Compliance’, the existing check-in counter and the concierge desk and entry doors do not comply with current ADA-ABA standards. The northern façade of the Ahwahnee Bar, a non-historic addition that is incompatible with the Very Significant exterior of the hotel, fronts onto the flagpole lawn, and is visually intrusive from the Porte Cochere and entry gallery. This addition impinges on the visitor’s sense of arrival.

Sweet Shop

The original Sweet Shop at The Ahwahnee was an ice cream and candy shop occupying three bays on the south side of the Registration Lobby; the existing Sweet Shop functions as a convenience shop within a reduced (single-bay) footprint. In addition, the original stained concrete floor has been covered with vinyl composition tile, and the wall and ceiling finishes have been altered.

Ahwahnee Bar

The Ahwahnee Bar is located in what was originally designed to be the Porte Cochere. Much of the space has been altered through renovations and additions; many elements are not original to the room or hotel. The bar is not accessible for employees, does not comply with health code, and the area presents space and sanitation challenges for operations (e.g., lack of sinks, storage, and food preparation area).



The Ahwahnee Bar (non-historic feature on east wall).
Hornberger + Worstell Photo

Dining Room

The service bar at the Dining Room, which was added in 1959, is not accessible by visitors or employees. The addition of the service bar also obscured original wainscoting and added non-original detail.

Ground Floor Heating, Ventilation, and Air Conditioning (HVAC) Systems

Public spaces at the ground floor (Ahwahnee Bar, Gift Shop, Sweet Shop, and Dining Room) and ground floor administrative offices are currently air conditioned by dedicated window units. However these spaces have no mechanical ventilation. They are naturally vented (e.g., through window and door openings), which presents visitor experience issues during extreme temperatures due to lack of ventilation when windows and doors are closed, and difficulty maintaining a comfortable temperature. In addition, the HVAC systems for these spaces do not meet current efficiency standards, and maintenance access is difficult.

Energy Efficiency and Sustainability

Insulation

The existing building envelope, which is constructed primarily of steel, concrete, and stone, contains little to no thermal insulation, resulting in energy loss to the exterior.

Windows and Doors

Existing windows at the ground floor and windows at the sixth floor are in varying states of deterioration and their single-pane glazing is not energy efficient. Existing doors on the ground floor are also deteriorating, and air leakage at these locations further reduces the energy efficiency in public spaces.

Guestroom windows, which were replaced with single-pane, aluminum-framed windows in 1976, are neither compatible with historic character nor energy efficient.

Heating Systems

The heating system for the hotel consists of steam boilers, steam to hot water heat exchangers, and in some locations, steam distribution and radiators. Steam boilers also heat the domestic hot water system, provide heat for the pool, and provide heat for the dormitory. The hotel heating system was upgraded in 1990; however, the boilers have exceeded their design life and are deteriorating. In addition, steam piping lacks insulation and in some locations steam piping is leaking.

Currently, the mechanical boiler room is not code compliant because there is no separation from the pool heating system and chemical storage.

Domestic hot water equipment includes two 1,500-gallon storage tanks with integral steam heat exchangers. Only one of these is in usable condition. These tanks have corroded over time, and leakage from the remaining tank in service necessitates frequent service.

The existing heating condensate loop is an open loop system, which is inefficient due to the loss of treated, preheated water that could be recaptured and reused.

Cooling Systems

A chilled water system for air conditioning was added to the hotel in 1990 to provide cooling to guestrooms, the Dining Room, the Sweet Shop, and the Gift Shop. The cooling system uses a HCFC (hydrochlorofluorocarbon) refrigerant, the availability of which will be phased out by 2020. Remaining spaces at the hotel are not air conditioned.

The chilled water system was originally designed to cool the cottages in addition to the hotel. However, the cottage and hotel systems have never been connected, and the chiller has never operated at full capacity. During the original installation, make-up air louvers in the cooling tower were not adequately sized per the manufacturer's recommendations. Since the chiller has never operated at full capacity, the lack of louvers has not been presented any known problems. Cooling at cottages is provided via temporary exterior heat pumps with indoor fan coils.

The kitchen refrigerators currently use a once-through cooling system, which removes heat generated by the refrigerator. This system does not meet modern energy efficiency standards.

Electrical Systems

The electrical equipment in the hotel has reached its life limit. With the exception of the air conditioning distribution system and the rooftop snowmelt system, the electrical system is close to maximum capacity and is not particularly efficient due to numerous additions over the years. In addition, a number of code-compliance issues have been identified with the existing electrical system at the hotel; these are addressed under ‘Fire/Life-Safety Compliance’ above.

The majority of the building’s electrical load comes from a utility-owned transformer located in a room at the northwest corner of the Kitchen wing. This transformer feeds a main distribution board in the main electric room located adjacent to the transformer. The main distribution board feeds numerous other panelboard systems for building distribution. The room containing hotel operations distributions is located in the basement, one floor below grade. In addition, one utility-owned transformer is located in an in-ground vault adjacent to the northwest corner of the Kitchen wing. This service provides power to the Kitchen and the hotel’s mechanical air conditioning system.

In the event of an emergency power outage, a backup generator is connected to the main distribution panel through a distribution switch. The backup generator is undersized and can only partially service the hotel.

Lighting fixtures, both historic and non-historic, are nearing their life limits. Selected historic fixtures (e.g., the Dining Room chandeliers) have recently been refurbished, but others have unsafe wiring or inadequate anchoring. Light fixture bulbs/lamps have previously been upgraded, with some fixtures fitted with fluorescent lamps where applicable. The retrofit reduced energy use throughout the hotel, but limited additional energy use control options.

Plumbing Systems

In general the plumbing systems serving the main hotel consist of a number of systems and system types that have been maintained, modified and added to over the years. In addition to issues noted under the ‘Heating Systems’ and ‘Cooling Systems’ sections above, the following conditions continue to affect the sanitary and domestic water supply:

Sanitary Systems

The interior sanitary system was installed in 1927 during hotel construction. The sanitary piping system is well past its design life and is in very poor condition. The sanitary system currently handles a fraction of its intended design due to buildup in the piping. The sanitary piping above the Great Lounge has leaked and been repaired numerous times over the years; the leaks have contributed to substantial deterioration of the historic decorative stenciling on the ceiling beams of that Very Significant public space. Wastewater lines beneath the Kitchen were replaced in the early 1990s; however these pipes are in poor condition from corrosion and oxidation, and numerous leaks have been reported and repaired.

Fixtures

Some fixtures at the hotel, including most of the guestroom bathroom fixtures, have been upgraded during the last 15 years and are low-flow. These fixtures are in fair condition.

Actions Common to All Action Alternatives

Fire/Life-Safety Compliance

Fire/Smoke Separation

To comply with fire code, concealed overhead fire doors would be installed at the openings between the Dining Room and adjacent ground floor and mezzanine rooms, and at the opening between the Dining Room and the Kitchen (Appendix B, Figure B-2). The overhead fire doors would be linked to the hotel alarm system installed as part of the 2010-2011 fire/life-safety project (see Appendix D: Cumulative Plans and Projects).

Elevators

Modifications to the service elevator would be made to achieve fire and accessibility code conformance by retaining the existing cab, replacing the existing service side pocket door and cage, and maintaining the existing tilt-up gurney. The service side cab door would be replaced with an automatic door to meet accessibility standards, and penetrations into the shaft would be sealed. The existing guest side gate and hoistway door would remain manual. The non-historic interior of the passenger elevator would be rehabilitated with materials compatible with the historic character.

The elevator shaft walls would be inspected for penetrations and discontinuities, and sealed where needed. Obsolete hoistway components and equipment that cannot be refurbished would be replaced. Elevator controls in both the service and passenger elevators would be upgraded to allow fire department recall to specific floors during an emergency.

Structural Fire Protection in Attic Spaces

Damaged fire proofing on the exposed steel in the attic spaces (primarily above guestrooms) would be replaced as necessary.

Vertical Shafts and Linen Facilities

Existing linen chute doors at guestroom floors would be retrofitted to comply with fire code.

Fire Department Access

The Ahwahnee Hotel

The existing fire department access surrounding the hotel would be upgraded to meet fire code specifications. Specifically, the existing turf-covered hardened base to the west and south of the hotel would be widened where necessary and lengthened on the east side of the hotel's South Wing in order to meet fire code requirements listed under the No Action Alternative, and to avoid damaging the hotel's historic concrete terraces (see Figure 2-7). No trees would be removed as part of this action.

The Ahwahnee Cottages

The existing unpaved fire department access road between the hotel parking area and the cottages, which currently varies from approximately 9 to 20 feet in width, would be modified to the code requirements listed in the No Action Alternative. The modification would include the access road and drainage crossings as described below.

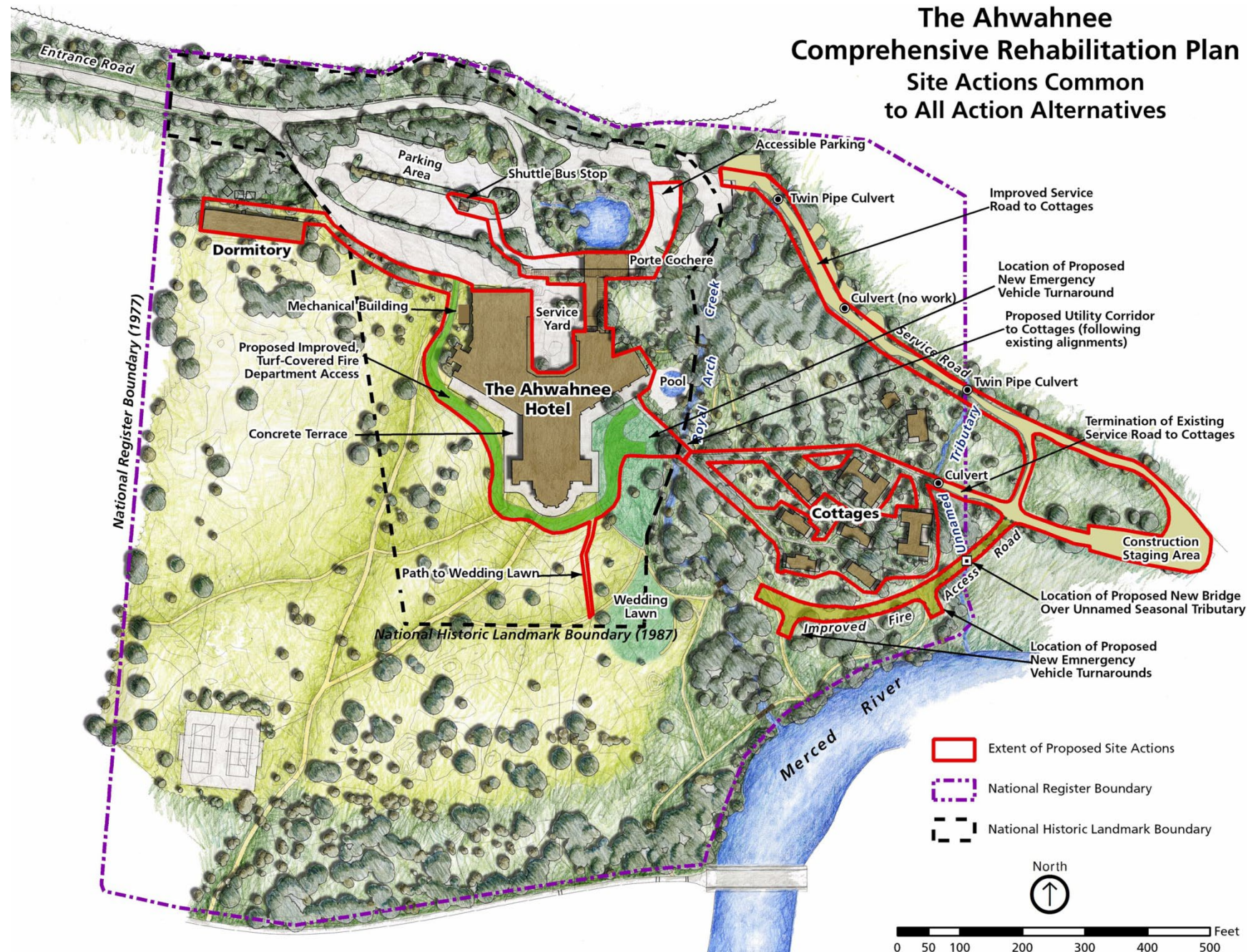


Figure 2-7 Site Actions Common to All Action Alternatives

Access Road

The existing fire access road (see Figure 2-7) would be graded, resurfaced with gravel, and widened where necessary to meet the code-required 16-foot road width. Several small cedars that abut the road may be removed to meet road width requirements. In addition, trees lining the road would be limbed to comply with vertical clearance requirements for fire truck access.

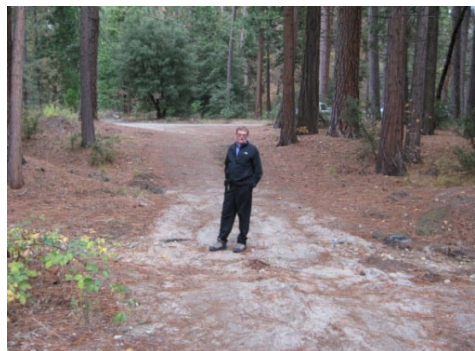
To comply with fire code regarding the maximum distance between structures and fire access roads, the existing access road would be extended south of the cottages along the alignment of an existing, unmaintained service road. The unmaintained dirt service road provides the only access to the southern and western side of the cottage area and it is the only means to access existing fire hydrants in that area. However, this unmaintained service road is not compliant with fire code requirements for width, surfacing, drainage crossings, and turnarounds. Therefore, the service road would be graded, graveled, and widened to a compliant 16-foot width where necessary.

With the extension of the fire access road, the distance between the road and the cottages would still exceed the standard allowable distance between the structures and fire truck access; however, a related action to install sprinklers at the cottages (see ‘fire protection systems’, below) would allow for a code variance permitting additional distance between the road and structures. Because this fire department access road extension would dead-end more than 300 feet from the nearest vehicle turnaround, a new, gravel-surfaced turnaround would be constructed in a previously disturbed area. No trees would be removed as a result of these actions; however, some trees may be limbed to comply with vertical clearance requirements for fire truck access.

Drainage Crossings

The existing access road utilizes five culverts at drainage crossings (see Figure 2-7); the National Park Service would investigate during design whether the existing culverts would need to be modified or replaced to meet fire code requirements for road width and load weight.

The extension of the formal fire department access road to the south of the cottages would require a new drainage crossing on an unnamed seasonal tributary. Currently, the unmaintained service road crosses a braided segment of the seasonal tributary to the Merced River via a hardened earth low water crossing. Low water crossings are not compliant with fire code, as drainage crossings must be all weather, and emergency vehicles and firefighters may not be subject to passing through water, ice, or soft roadbeds.



Low water crossing at the unnamed seasonal tributary near The Ahwahnee cottages. DNC Photo

The National Park Service has determined a bridge is required to allow emergency vehicles and personnel to access the cottages in a code-compliant manner. The bridge would meet the width and load requirements for fire department access noted above. The span and abutment placement would be determined by hydrologists and engineers during design development, with the span and profile minimized to the extent feasible. The bridge would be designed to accommodate the braided flow channel on this tributary in order to minimize impacts to hydrologic function and free-flowing condition. The bridge abutments would be constructed outside of the ordinary high water mark and in accordance with U.S. Army Corps of Engineers and California Regional Water Quality Control Board permit stipulations. Best Management Practices (Appendix E) would be used to ensure construction activities do not affect water turbidity, temperature, or nutrient

availability. The bridge would also be designed to be compatible with the character of the cultural landscape.

Fire Protection Systems

Ahwahnee Cottages

As noted in the No Action Alternative, fire alarm and sprinkler systems are not specifically required by fire code for the cottages, as the guestrooms have exterior exit access directly to the ground floor. However, based on issues encountered during inspections, a fire alarm system is required by the fire marshal to provide a reliable means of notifying guests during a smoke condition. In addition, the battery powered smoke detectors at the cottages would be replaced with hard-wired detectors and carbon monoxide detection units would be provided where gas flame appliances or burning of solid fuel (e.g., fireplaces, wood stoves) are present.

The requirement for installation of automatic sprinkler protection for the cottages is based on the inability to provide fire department access within the standard distances allowed. Sprinklering the cottages would allow for a code variance from the park fire marshal to allow additional distance between the fire department access road and the cottages. Therefore, fire sprinkler, detection and alarm systems would be provided at each cottage unit in accordance with fire marshal determinations.

Ahwahnee Dormitory

Fire sprinkler, detection, and alarm systems would be provided in accordance with fire code.

Electrical Systems

Code compliance issues with the existing electrical systems would be addressed by providing the following:

Grounding

The hotel electrical system would be grounded through installation of new electrical equipment in the switchgear and generator room. The new equipment would be bonded to grounding elements such as building steel, cold water piping, and grounding wires placed underground.

Short-circuit Protection

Protection would be achieved at the distribution board and panelboard level, by upgrading circuit breakers and the distribution system to isolate faults and avoid further damage to the entire electrical system.

Seismic Safety Recommended Practice and Structural Strengthening

Dining Room

The Dining Room would be braced to existing concrete walls and the stone columns in the Dining Room would be interconnected through a system of concrete caps and tie beams at the tops of the columns. Safety glazing that meets seismic life-safety requirements would be installed on windows over 16 square feet in the Dining Room and Solarium without altering the original window frame profile. The Dining Room roof trusses would be strengthened at the existing historic steel splice plate connections, and new snowmelt and retention capability would be provided at the roof.

Kitchen Floor

The existing kitchen equipment, kitchen floor finishes and drains, and deteriorated, structurally unsound sections of floor slab would be removed and a new raised reinforced slab installed. This action would be performed in conjunction with the seismic upgrades needed for the Dining Room. The existing floor would be replaced with waterproofing substrate, flooring, and a base that complies with health and safety codes.

The kitchen equipment and electrical equipment would be moved to temporary storage during construction, and a temporary kitchen would be provided on the hotel grounds if construction occurred while the hotel remained open.

Stone Chimneys (Cottages)

Blocking and strapping would be installed in attic spaces to brace the stone chimneys at the cottages.

South Wing Interior Walls

Two-story walls at the two Great Lounge fireplaces would be braced to the building structure with strong backing at selected locations.

Accessibility Compliance

To address ADA-ABA code deficiencies, the following would be provided:

Employee Facilities

Due to the proposed structural strengthening actions to brace the Dining Room, new space would be available for service support programs at the new Kitchen south mezzanine. This space would be used in part to provide fully accessible employee locker rooms and offices.

As a result of this new service use at the Kitchen mezzanine level, an accessible path of travel to the service elevator would be required. Accordingly, the existing non-compliant door configuration at the North Mezzanine exit stair would be altered for ADA-ABA compliance.

Improvements to The Ahwahnee back bar and prep kitchen would include improved ADA accessibility to the workstation.

Parking and Paths of Travel

The number of existing accessible parking spaces at the hotel would be increased to seven within the existing paved area in order to meet ADA-ABA requirements. In addition, the path of travel between the parking area and the hotel would be improved and better delineated per ADA-ABA requirements.

The path of travel between the hotel and wedding lawn would be improved. The existing dirt path would be leveled and hardened with a permeable, resin surface to meet accessibility requirements. In addition, the existing paved path of travel to all of the cottages would be rehabilitated and improved to meet ADA-ABA requirements (this action would be coordinated with the installation of utilities beneath the pathway; see 'Operations' below).

Historic Rehabilitation

Please see Appendix C for a description of significance, historic integrity, and condition classifications of features and spaces at The Ahwahnee. Based on the results of the evaluation presented in Appendix C, rehabilitation actions under all action alternatives would include the following:

- Rehabilitate or stabilize historic features with a ‘poor’ condition rating. This would include boiler and mechanical rooms in the hotel basement, concrete paving at the east and west terraces of the hotel, some hotel balconies, patios at the guest cottages, and maintenance building interiors;
- Preserve or rehabilitate Very Significant and Significant spaces in fair condition, including hotel windows, balconies, stained concrete walls and other exterior features; the hotel Registration Lobby finishes and registration desks; public use areas on the ground floor (e.g., Elevator Lobby, Solarium, Mural Room, Winter Club Room, Under Lounge, Great Lounge) and mezzanine level (i.e., Colonial Room, Tudor Lounge, Tresidder Room, Women’s Lounge); several hotel balconies; the sixth floor library and sun porch; and several interior and exterior features at the cottages;
- Perform rehabilitation work associated directly with actions that would affect the historic fabric or features in the hotel and cottages, such as restoring stenciling or restoring the original stained concrete floors.

Operational Efficiency

‘Back of House’ Facilities

As a result of the structural strengthening proposed to brace the Dining Room and the associated work in the Kitchen, there will be new square footage available for ‘back of house’ facilities at the new Kitchen mezzanine. New, accessible men’s and women’s locker rooms and an employee break room that meet ADA-ABA requirements would be provided on the new south mezzanine in the Kitchen.

As noted under ‘Accessibility’ above, an accessible path of travel to the service elevator is required at the mezzanine level to accommodate new employee facilities. Accordingly, the existing non-compliant door configuration at the North Mezzanine exit stair would be altered for ADA-ABA compliance.

Administrative Offices

To address accessibility and visitor experience issues with the public restrooms on the ground floor, administrative offices would be relocated to the Gift Shop mezzanine level to maintain adjacency to the front desk. New facilities at the new Kitchen mezzanine level would be four feet lower than the adjacent Gift Shop mezzanine level; the new employee facilities in this area would require a new wheelchair lift in order to comply with ADA-ABA accessibility requirements.

Utilities

A consolidated utility corridor from the hotel to the cottages would be installed following existing circulation paths to the extent possible (Figure 2-7), branching into separate conveyances in the cottage vicinity, with a separate utility corridor running to each cottage. Further design will dictate the exact route and distribution points. The route would require crossing Royal Arch Creek, a Merced River tributary. It is anticipated that utilities would be suspended from underneath the existing footbridge.

Dining Room

The service bar and its non-historic detailing at the Dining Room would be removed and the historic wainscoting restored. The bar would be replaced with an accessible portable bar and an accessible back bar.

Visitor Experience and Visitor Services

Sweet Shop

The vinyl composition tiles would be removed to expose and restore the original stained concrete floors. In addition, the wall and ceiling finishes would be restored. The existing Sweet Shop configuration would be retained.

Hotel Heating, Ventilation, and Air Conditioning (HVAC) Systems

In addition to HVAC items addressed under fire/life-safety compliance, above, HVAC systems at the hotel would be upgraded and/or modified as follows:

Ahwahnee Bar

The existing steam heating air handling unit would be replaced with a new hot water heating and chilled water cooling air handling unit. Ductwork, insulation, and grills would be replaced.

Gift Shop

The existing air handling unit would be replaced.

Sweet Shop

The existing fan coil unit would be replaced with a new fan coil unit in the basement; ductwork would be routed through an existing storage closet.

Registration Lobby

New fan coil units for air conditioning would be installed.

Kitchen

The existing in-window air conditioners would be replaced with new fan coil units for air conditioning.

Dining Room

The air handling unit serving the Dining Room would be replaced, and a new mechanical room with adequate space for access and maintenance would be provided.

Cottage HVAC Systems

The temporary HVAC systems at the cottages including concrete pads would be removed. A concealed split system of heat pumps and condensers would be provided for heating and cooling. Chilled water and hot water from the hotel central plant would be provided at concealed four-pipe fan coil units. Electrical bathroom heaters in guest bathrooms would be replaced with more efficient units, and toilet exhaust fans at the cottages would be replaced.

Energy Efficiency and Sustainability

Insulation

Rigid (foam) insulation would be attached to the underside of the roof assembly in attic spaces, where feasible. Waterproof insulation would be attached or adhered to the underside of the concrete slab in crawl spaces, where feasible. Additional insulation would be provided at refrigerator doors in the Kitchen.

The domestic hot water piping system would be insulated in locations where it is currently accessible or where it would be accessible during implementation of other proposed actions. Additionally, weather stripping would be provided at existing wall accessories and penetrations (e.g., outlets, fixtures) and around doors where it is currently deteriorated or missing.

Windows and Doors

The energy efficiency of windows and doors at the hotel would be improved as follows:

- Non-historic aluminum guestroom windows at the hotel would be replaced with historically compatible wood-framed casement windows with double-paned insulated, low-emissivity (low-e) glass.
- The condition of ground floor windows, frames, and doors would be surveyed, evaluated, and assessed. Caulking would be evaluated, and if necessary, carefully replaced at windows and trims.
- Where necessary, doors or door elements would be replaced in-kind.

Cooling Systems

The existing chiller and cooling tower at the hotel would be replaced with high efficiency equipment that uses a non-HCFC refrigerant. A new chiller room would be provided in a reconfigured area of the Kitchen. Guestrooms at the hotel would be provided with new fan coil units to replace older, less efficient units. The new unit would be sized to provide cooling to the hotel, cottages, and dormitory.

Electrical Systems

In addition to proposed actions under ‘Fire/Life-Safety Compliance – Electrical Systems,’ the electrical equipment at the hotel would be upgraded as follows:

- Existing transformers would be replaced with new high-efficiency transformers in their existing locations.
- The backup generator, main switchgear, and related automatic transfer switches would be replaced.
- Per electric code, new transfer switches would be provided in a reconfigured the emergency generator room (the location of which may vary by alternative); the switch will supply, distribute, and control power and illumination essential for safety to human life (e.g., egress pathways and exit signs).
- Existing obsolete equipment (e.g., kitchen appliances) would be replaced with Energy Star/EPA Watersense equipment.

Plumbing Systems

New low-flow plumbing fixtures would be provided in all new installations, including the new employee locker rooms and new public restrooms. Guestroom fixtures would be replaced at the

hotel and cottages. Fixtures at the Kitchen, guest bathrooms, and dormitory bathrooms would be replaced with water conserving fixtures. Specifically:

- Guestroom showerheads would be replaced with low-flow showerheads.
- Guestroom and public faucet aerators would be replaced with low-flow aerators.
- Employee showerheads and faucets would be replaced with low-flow fixtures.
- Kitchen dishwashing equipment would be replaced with a combination of water efficient sprayers and a higher efficiency dishwasher.

In addition, the aged sanitary system piping would be removed and replaced with new PVC piping throughout the hotel. The condition of vent piping would be evaluated and replaced as needed.

Alternative 1

Overview

Alternative 1 comprises actions provided in the Actions Common to All Action Alternatives plus additional actions to meet the purpose and need objectives identified in Chapter 1 with minimally invasive measures. This alternative would rely on code waivers and operational management wherever possible to meet project goals. Alternative 1 would maintain current program spaces to the extent practicable, for both operational efficiency and to improve visitor experience, while meeting minimum safety code requirements.

Alternative 1 also proposes historic rehabilitation of historic fabric and features throughout the hotel and cottages that are rated in *The Ahwahnee Historic Structures Report* (ARG 2011) as being in “poor” condition, and historic fabric and features rated as being in “fair” condition in the Significant and Very Significant spaces. The energy efficiency elements of this alternative would implement measures that affect the building and historic fabric only where other work is occurring or where there otherwise would be no impact on the historic resource.

For a summary of the work proposed under Alternative 1, please see Table 2-1. For the locations of actions within the hotel, please see Figures 2-1 through 2-6. A detailed depiction of proposed major work items is included as Appendix B.

Fire/Life-Safety Compliance

In addition to the Actions Common to All Action Alternatives, Alternative 1 would implement the following to address fire/life-safety deficiencies:

Egress

The existing single means of egress would remain at the South Mezzanine. The South Mezzanine meeting rooms (Tresidder Lounge, Colonial Room, and Tudor Room) would remain closed to public use. The Colonial Room and Tudor Lounge could be used for employee meetings with up to 30 park or concessioner staff. Due to travel distance exceedances, the Tresidder Room would remain closed to all uses.

The non-compliant spiral stairway egress from the second floor at the East Wing would be removed and a new interior stairway constructed from the second floor to the mezzanine level. A new code-compliant interior exterior stairway would be constructed from the mezzanine level to the ground floor (Appendix B, Figure B-1). Additional actions associated with this stairway would include reconfiguration of the Ahwahnee Bar, on the ground floor of the East Wing (see ‘Visitor Experience’, below), and the addition of two accessible guest suites, one of which would have an accessible balcony (see ‘Accessibility Compliance’, below).

Vertical Shafts and Linen Facilities

Compliance with fire code at guestroom mechanical shafts would be addressed by properly sealing the bottom of shafts, providing a fire damper or ducted boot at each toilet exhaust grille at the main exhaust shaft, and repairing ductwork in the attic spaces.

A two-hour wall assembly surrounding the Linen Room and a new rated door to the Linen Room would be installed to meet fire separation requirements.

Fire Department Access

Hotel locks would be re-keyed to a new master key system in order to provide more efficient access for emergency personnel.

Electrical Systems

Code compliance issues with the existing electrical systems would be addressed by providing the following:

- **Distribution panels:** The floor of the existing main switchboard and generator room would be raised above grade to avoid flooding damage during heavy spring runoff or during heavy rains. Waterproofing at the basement distribution room would be upgraded, and a new sump pump would be installed to prevent water from entering the room.
- **Conduit Raceways:** Corroded conduit feeders under the Kitchen would be replaced with material suitable for wet conditions.

Ventilation and Exhaust Systems

Code compliance issues with the existing ventilation and exhaust systems at The Ahwahnee would be addressed by providing the following:

- **Guestrooms:** Natural ventilation, through operable windows, would remain.
- **Guestroom Corridors:** The existing ventilation system (fans, ductwork, etc.) would be refurbished. Code-compliant make-up air with fire smoke dampers would be provided at each level.
- **Guest Bathrooms:** Code-compliance issues with ventilation would be addressed by providing fire dampers or sub ducts at each toilet exhaust grille and repairing or refurbishing existing toilet exhaust fans.
- **Electrical Room and Elevator Penthouse:** Ventilation and cooling systems would be provided to the existing electrical rooms. A chilled-water fan coil unit would be provided for the elevator machine room.

Seismic Safety Recommended Practice and Structural Strengthening

In addition to the Actions Common to All Action Alternatives, Alternative 1 would provide the following to address seismic safety and/or structural strengthening issues:

Dining Room

The Dining Room would be braced in the north-south direction to a new minimally-sized mezzanine on the south side of the Kitchen. The mezzanine would include a deck that would meet cleanable ceiling code requirement over cooking areas, minimize the reconfiguration of the North Mezzanine area, and accommodate employee accessibility needs. This action would require new foundations in the Kitchen crawl space, a new partial floor slab, and an elevated slab above the Kitchen (Appendix B, Figure B-3).

Stone Chimneys

Stone chimneys at the hotel would be reinforced with an exterior collar strap and guy wires anchored to the roof structure.

South Wing Interior Walls

Because it is not required for life-safety under recommended industry practice, no work would be performed to address the potential seismic damage from lack of shear walls at the Great Lounge.

Exterior Walls

Stainless steel pins would be inserted at the mortar joints to anchor the historic exterior granite veneer above egress paths.

Porte Cochere

No work would be done to stiffen the entry walkway and Porte Cochere to reduce the potential for damage during a ground shaking event.

Mechanical, Electrical, and Plumbing Equipment

No work would be done to anchor or brace existing mechanical, electrical, or plumbing equipment.

Accessibility Compliance

In addition to the Actions Common to All Action Alternatives, Alternative 1 would provide the following to address ADA-ABA code deficiencies:

Main Entry and Ground Floor Entrances

Per a previously approved code variance, the main entry to the hotel would not be provided with an electronic assist option. The existing hardware and thresholds at selected ground floor entrances/exits would be provided with reversible ramps and compliant hardware.

South Mezzanine Meeting Rooms

A limited use-limited access elevator would be installed in an existing storage closet area at the Solarium in order to provide access to the South Mezzanine meeting rooms to comply with federal ADA-ABA standards. The beam and slab at the ground floor would be modified below the elevator to install a suspended pit structure, and the elevator would be concealed within the walls of the existing floor plan. The existing stair to the South Mezzanine would be re-configured, retaining the water feature at the Solarium (Appendix B, Figure B-4).

Registration Lobby

The existing hotel registration area would be modified to meet current ADA-ABA standards. Specifically, the existing drop-down counter at the historic registration desk would be modified to allow for accessible check-in. In addition, the non-historic concierge counter would be removed and replaced with furnishings and a desk for concierge service.

Restrooms

The public men's restroom on the ground floor would remain as-is, and an accessible unisex restroom would be added on the ground floor. The women's public restroom on the mezzanine level would be expanded to increase fixture count and maintain the current level of accessibility.

Guestrooms

Alternative 1 would add two accessible guestrooms to the hotel as required per ADA-ABA code. In conjunction with replacing the East Wing spiral stair, East Wing guestrooms #106 and #107 would be combined into one accessible suite with a new accessible terrace constructed over the new Ahwahnee Bar kitchen (Appendix B, Figure B-5).

Similarly, East Wing guestrooms #206 and #207 also would be combined into one accessible suite on the second floor (Appendix B, Figure B-5).

Employee Facilities

Improvements to the service areas in the new Ahwahnee Bar kitchen would meet accessibility requirements.

Historic Rehabilitation

Historic rehabilitation actions under Alternative 1 would be the same as those in the ‘Actions Common to All Action Alternatives’ section.

Operational Efficiency

In addition to the Actions Common to All Action Alternatives, Alternative 1 would provide the following to address operational efficiency:

Kitchen Facilities

The existing equipment at the Kitchen would be removed to implement the work proposed in the Kitchen area for compliance with fire/life-safety codes, seismic and structural standards, and accessibility requirements. The reinstallation of kitchen equipment would need to meet current mechanical, electric, and plumbing codes, health codes, and ADA-ABA accessibility standards. Under Alternative 1, a new more efficient layout with code-compliant features (e.g., health code-required sanitary wall, floor and ceiling finishes) would be provided. Existing equipment in the north Kitchen area would be retained and reused when possible.

The electrical systems that support the Kitchen would be upgraded to a 480-volt system using electrical panels located in a dedicated room within the Kitchen wing.

The existing exhaust fans and the make-up, heating, and ventilation air handling units would be refurbished, modified, and reused as much as possible in the new Kitchen layout. The hot water propane boiler would be reused.

‘Back of House’ Facilities

In addition to the new ‘back of house’ facilities in the new Kitchen mezzanine in Actions Common to All Action Alternatives, new banquet/chef offices would be located in the new Kitchen mezzanine in approximately the same square footage as the existing facility. Laundry facilities would be reorganized in their current location, and mechanical rooms would remain in their existing locations.

Porte Cochere and Maintenance Shed

Under Alternative 1, no work would be done to the existing maintenance shed adjacent to the Porte Cochere and entry walkway. Vertical clearance at the Porte Cochere would remain 11.5 feet.

Electrical Systems

The existing main point of entry (MPOE) for the telecommunications services at the hotel would be retained at its existing location.

New electrical equipment (e.g., outlets and lighting) at The Ahwahnee dormitory would be updated where rehabilitation work is proposed.

Mechanical and Plumbing Systems

The existing central mechanical/electrical/plumbing pneumatic control system would be replaced with an electronic (direct digital control, or DDC) system to monitor, control, and optimize operation of major heating, ventilation, and air conditioning systems, as well as critical operation of electrical and plumbing systems.

Deteriorated pressure-reducing valves would be replaced where feasible. An upgraded, re-circulating domestic hot water system would be provided at guestrooms.

Visitor Experience and Visitor Services

In addition to what is provided under the Actions Common to All Action Alternatives, under Alternative 1 the following elements of visitor service and related visitor experience would be improved:

Registration Lobby and Arrival Experience

As noted under ‘Accessibility Compliance’ above, Alternative 1 would remove the non-historic concierge desk and a new, accessible and portable concierge desk would be provided at the Registration Lobby. An accessible check-in would be provided at the existing manager’s office across the hall from the concierge desk and lounge area.

The lounge area would be refurnished with furnishings compatible with the historic character of the hotel. In addition, the Very Significant stained concrete and rubber tile floors at the Registration Lobby would be rehabilitated.

Ahwahnee Bar

The non-historic addition at the east wall of the Ahwahnee Bar would be removed in conjunction with addressing egress from the East Wing (i.e., where the non-compliant spiral stairway egress from the second floor would be removed and a new interior stairway constructed from the second floor to the mezzanine level). The non-historic bar and food prep areas would be relocated and replaced with accessible facilities on the north end of the room. Glazing would be added at the east wall to bring in light.

Energy Efficiency and Sustainability

In addition to the Actions Common to All Action Alternatives, Alternative 1 would provide the following energy efficiency and/or sustainability measures:

Heating Systems

The hotel heating system would be improved as follows:

- The existing steam boilers at the hotel would be replaced with new high-efficiency steam boilers at their current location.

- All steam piping in the hotel would be replaced.
- Domestic hot water piping would be insulated.
- Existing steam radiators at the hotel would be reused, repaired, or refurbished as needed.
- The existing heat exchangers for domestic hot water and pool heating hot water would be retained.
- An area would be provided for above grade pool chemical storage, separate from the boiler room. The number of outdoor air louvers at the boiler room would be increased for code compliance.
- The existing domestic hot water storage tanks would be replaced with new insulated hot water storage tanks.
- The existing heat condensate loop would be closed.

Cooling Systems

The once-through cooling at the kitchen refrigerators would be eliminated and replaced with more energy-efficient cooling (i.e., air cooling).

Electrical Systems

In addition to proposed actions under ‘Fire/Life-Safety Compliance – Electrical Systems,’ the electrical equipment at the hotel would be upgraded as follows:

- The 208-volt and 480-volt systems would remain separate. Electrical equipment would be located in a modified electrical room on the north side of the Kitchen.
- The basement electrical room would remain in its current location. New ventilation systems would be provided to the existing basement electrical room and the ground floor emergency generator room.
- Per electric code, a new transfer switch would be provided in the new generator room for legally required standby systems. The switch would supply, distribute, and control power and illumination to required facilities (e.g., elevators, air conditioning and hot water circulation pumps) for both illumination and power.

Lighting

Historic lighting fixtures in public ground floor spaces would be refurbished. Exterior lighting fixtures would be modified to incorporate LED technology in conjunction with guidance provided in *Yosemite National Park Lighting Guidelines*. Interior lighting would incorporate LED technology to minimize electric loads.

Plumbing Systems

New low-flow plumbing fixtures would be provided in all new installations, including the new employee locker rooms and new public restrooms. Guestroom fixtures would be replaced at the hotel and cottages. Fixtures at the Kitchen, guest bathrooms, and dormitory bathrooms would be replaced with water conserving fixtures. Specifically:

- Guestroom toilets flush valves would be replaced with a low-flush model.
- Public restroom toilet flush valves would be replaced with a low-flush model. Urinals would be replaced with a low-flush model.

In addition, the aged sanitary system piping would be removed and replaced with new PVC piping throughout the hotel. The condition of vent piping would be evaluated and replaced as needed.

Estimated Cost and Construction Schedule

The net construction cost of Alternative 1, based on 50% schematic design (Hornberger+Worstell 2010b), is approximately \$45 million. However, actual costs of implementing projects within this plan would depend on funding availability. Prioritization criteria have been developed to inform the construction phasing strategy for long-term implementation of the Comprehensive Rehabilitation Plan based on correcting urgent deficiencies, critical deficiencies, and necessary corrections and taking into consideration the interdependency of actions based on proximity, operational logistics, or related structural or functional actions.

The cost estimate is based on the assumption that The Ahwahnee would be closed for approximately 24 months to implement the proposed work. However, this assumption was made for costing purposes only. Ultimately, the time needed to implement this alternative may be up to 20 years, depending on the availability of funding.

Alternative 2

Overview

Alternative 2 would address fire and life-safety, seismic, structural, and accessibility code and standard deficiencies using more substantive code compliance, and would exceed the basic seismic safety requirements for federal buildings while providing a higher degree of historic rehabilitation and operational improvements than Alternative 1. Alternative 2 would also reorganize the space program in areas already affected by proposed actions to facilitate best operational practices. The visitor experience would be substantially improved as well with designs that are compatible with the historic character of the spaces affected.

Like Alternative 1, Alternative 2 proposes historic rehabilitation of features throughout the hotel and cottages that are rated in *The Ahwahnee Historic Structures Report* (ARG 2011) as being in “poor” condition and rehabilitation of historic fabric and features in “fair” condition in historically Very Significant and Significant spaces. In addition, Alternative 2 includes implementation of non-maintenance treatment recommendations from *The Ahwahnee Historic Structures Report* (ARG 2011) in “contributing” and “historic utilitarian” spaces.

An additional goal of Alternative 2 is to improve energy and water-use efficiency by using measures that would have minimal impact on the building and site.

For a summary of the work proposed under Alternative 2, please see Table 2-1. For the locations of actions, please see Figures 2-1 through 2-6. A detailed depiction of proposed major work items is included as Appendix B.

Fire/Life-Safety Compliance

In addition to the Actions Common to All Action Alternatives, Alternative 2 would implement the following to address fire/life-safety deficiencies:

Egress

A new exterior exit would be constructed at the South Mezzanine in the Tresidder Room in order to meet fire code egress requirements. The path of egress would require constructing a new exterior door at the north side of the Tresidder Room to access an existing exterior stairway from the second floor to the ground floor on the south side of the hotel (Appendix B, Figure B-6).

At the East Wing, the non-compliant spiral stairway egress from the second floor would be modified to join a new landing on the mezzanine level. The non-compliant fire escape below the mezzanine level would be removed, and a new compliant exterior stairway constructed from the mezzanine landing to the ground floor (Appendix B, Figure B-7). Additional actions associated with this stairway include reconfiguration of the Ahwahnee Bar (see ‘Visitor Experience’, below) and the addition of one accessible guest suite with an accessible balcony (see ‘Accessibility Compliance’, below).

Vertical Shafts and Linen Facilities

Compliance with fire code at the guestroom shafts would be addressed by providing a new metal fully ducted system, properly sealing the bottom of shafts, and installing wood-blocking or fire-safing at all floor penetrations.

The linen room would be expanded and its fire rating would be improved to code; the vertical chutes would have new intakes doors and improved fire resistance between floors and public areas.

Fire Department Access

Under Alternative 2, new electronic key card devices would be provided in existing doors to simplify access for emergency personnel. The key card devices would be compatible with historic character.

Electrical Systems

Code compliance issues with the existing electrical system at the hotel would be addressed by providing the following:

- **Distribution panels:** The floor of the existing main switchboard and generator room would be raised above grade to avoid flooding damage during heavy spring runoff or during heavy rains. The basement distribution room would be relocated to a more central location on the first floor, on the north side of the reconfigured Kitchen (see 'Kitchen' under 'Seismic Safety', below). Waterproofing at the basement room would be upgraded and a new generator installed.
- **Conduits/ Raceways:** Corroded conduit feeders under the Kitchen would be replaced with material suitable for wet conditions. In addition, where it is accessible or in conjunction with other work performed under this plan, old cloth-wrapped wiring would be abandoned and replaced with code-compliant metal-clad cable.

Ventilation and Exhaust Systems

Code compliance issues with the existing ventilation and exhaust systems at The Ahwahnee would be addressed by providing the following:

- **Guestrooms:** A new mechanical ventilation system, including shafts, ductwork, dampers, and outside air grille would be provided.
- **Guestroom Corridors:** A new corridor ventilation system would be provided.
- **Guest Bathrooms:** Fire dampers or sub ducts at each toilet exhaust grille and new toilet exhaust fans would be provided.
- **Electrical Room and Elevator Penthouse:** Ventilation and cooling systems would be provided to the existing and new electrical rooms. A permanent cooling system would be provided at the elevator penthouse with an exterior vent through an existing window opening.
- **Public and Employee Spaces:** New exhaust and make-up air systems would be provided at public restrooms, Ahwahnee dormitory restrooms, and linen rooms.

Seismic Safety Recommended Practice and Structural Strengthening

In addition to the Actions Common to All Action Alternatives, Alternative 2 would provide the following to address seismic safety and/or structural strengthening issues:

Dining Room

The Dining Room would be braced in the north-south direction to a brace frame in the Kitchen. The brace frame would have a diaphragm that would comprise a new partial mezzanine on the south side of the Kitchen with a deck that would meet cleanable ceiling code requirement over cooking areas and accommodate employee accessibility needs. This action would require new

foundations in the Kitchen crawl space, a new partial floor slab, and an elevated slab above the Kitchen (Appendix B, Figure B-8) (see ‘Kitchen Floor’ below).

Stone Chimneys

Stone chimneys at the hotel would be reinforced with interior core steel bracing and a concrete collar in the attic, at the base of the stone veneer.

South Wing Interior Walls

Four concrete shear walls would be installed in the interstitial space of existing walls at the Elevator Lobby and Solarium to help mitigate damage to Very Significant historic features in the Great Lounge, Solarium, and Elevator Lobby in the event of a 2,500-year earthquake.

Exterior Walls

Stainless steel pins would be inserted through the mortar joints to anchor the exterior granite veneer throughout the building. This work would exceed code requirements.

Porte Cochere

The entry walkway and the Porte Cochere would be stiffened by tying them to an adjacent, reconstructed maintenance shed (see “Operational Efficiency, Maintenance Shed”, below).

Mechanical, Electrical, and Plumbing Equipment

Mechanical, electrical, and plumbing equipment would be anchored, braced, or strengthened, including: elevator equipment, boilers, electrical transformers, fire sprinkler piping, kitchen and food service equipment, emergency lighting and power systems, HVAC equipment, fuel tanks, and laundry equipment. This work would exceed seismic standard requirements.

Accessibility Compliance

In addition to the Actions Common to All Action Alternatives, Alternative 2 would provide the following to address ADA-ABA code deficiencies:

Main Entry and Ground Floor Entrances

The main entry to the hotel would be provided with automatic door openers and compliant thresholds. The existing hardware and thresholds at other selected ground floor entrances/exits would be provided with reversible ramps and compliant door hardware.

South Mezzanine Meeting Rooms

A limited use-limited access elevator would be installed between the Solarium and the Under Lounge to provide access to the South Mezzanine meeting rooms in order to comply with federal ADA-ABA standards. The beam and slab at the ground floor would be modified below the elevator to install a suspended pit structure. Portions of the existing walls and structure would be removed and the structure altered to accommodate the new elevator and elevator enclosure. This action would coincide with shear wall installation in the Elevator Lobby and Solarium (Appendix B, Figure B-9).

Registration Lobby

The existing hotel registration area would be modified to meet current ADA-ABA standards. Specifically, the non-historic concierge counter would be removed and replaced with furnishings and a desk for accessible concierge service and accessible check-in.

Restrooms

The public men's restroom on the ground floor would be provided with extra fixtures. The women's public restroom on the mezzanine level would be retained, and a new accessible women's public restroom would be provided on the ground floor.

Guestrooms

Alternative 2 would add two accessible guestrooms to the hotel as required per ADA-ABA code. In conjunction with replacing the East Wing spiral stair, East Wing guestrooms #106 and #107 would be combined into one accessible suite with a new accessible terrace constructed over the new Ahwahnee Bar kitchen (Appendix B, Figure B-5).

In addition, a standard guestroom on the fourth floor (#450) would be converted into an accessible standard guestroom.

Historic Rehabilitation

Please see Appendix C for a description of significance, historic integrity, and condition classifications of features and spaces at The Ahwahnee. Based on the results of the evaluation presented in Appendix C, in addition to Actions Common to All Action Alternatives, Alternative 2 would implement non-maintenance treatment recommendations at the hotel and cottages as detailed in *The Ahwahnee Historic Structures Report* (ARG 2011) for features and/or fabric in Contributing and Historic Utilitarian spaces.

Operational Efficiency

In addition to the Actions Common to All Action Alternatives, Alternative 2 would provide the following to address operational efficiency:

Kitchen Facilities

The existing equipment at the Kitchen would be removed to implement the work proposed in the Kitchen area for compliance with fire/life-safety codes, seismic and structural standards, and accessibility requirements. The reinstallation of kitchen equipment would meet current mechanical, electric, and plumbing codes, health codes, and ADA-ABA accessibility standards. Under Alternative 2, a new more efficient layout with code-compliant features (e.g., health-code-required sanitary wall, floor and ceiling finishes) would be provided. Existing equipment would be replaced with Energy Star/EPA Watersense equipment. The existing north mezzanine would be removed and a new north mezzanine constructed. The existing historic cooler doors would be salvaged for installation on the new refrigerators.

The electrical systems that support the Kitchen would be upgraded to a 480-volt system using electrical panels located in a dedicated room within the Kitchen.

The existing kitchen exhaust fans and the make up, heating, and ventilation air handling units would be reused and relocated in the new Kitchen layout, if feasible. New ductwork and fans would be provided as necessary. In addition, new propane boilers would be provided.

‘Back of House’ Facilities

As a result of the structural strengthening proposed to brace the Dining Room (see ‘Seismic Safety Recommended Practice and Structural Strengthening’, above) and the associated work in the Kitchen, there will be new square footage available for ‘back of house’ facilities at the new Kitchen mezzanine. New, accessible men’s and women’s locker rooms and an employee break room would be provided that meet current ADA-ABA requirements and health code.

In addition, expanded banquet/chef offices would be located in the new Kitchen mezzanine. Laundry facilities would be reorganized in their current location, and mechanical rooms would be relocated to improve access for maintenance staff.

Porte Cochere and Maintenance Shed

Under Alternative 2, the existing non-historic maintenance shed would be removed and a new maintenance shed structure would be constructed that ties into and stiffens the Porte Cochere and entry walkway (see ‘Seismic Safety Recommended Practice and Structural Strengthening’, above). The historic entry walkway would be retained and preserved.

The new interior of the maintenance shed would include additional storage for the Gift Shop, a work area, enclosed garbage and recycling spaces, and an enlarged luggage and valet/bell desk. In addition, a unisex bathroom would be provided for public use off of the entry walkway.

The Porte Cochere would be raised to provide the 13.0-foot standard vehicle clearance needed for modern charter buses. In order to raise the vertical clearance, the Porte Cochere would be detached from the entry walkway and jacked from beneath the existing stone and wood columns to the new height, and new concrete bases would be installed under the existing columns. Accessible curb cuts would be provided as part of this action.

Electrical Systems

The existing main point of entry (MPOE) for the telecommunications services at the hotel would be relocated near the electrical service point within the footprint of the hotel in a location of sufficient size, consistent with the location of other utilities entering the building.

The electrical systems at The Ahwahnee dormitory would be fully upgraded to support the current load of the dormitory. Electrical equipment would remain in its existing locations. New or retrofitted equipment, including outlets, receptacles, and light switching would comply with current electric code and ADA-ABA requirements. In addition, new service from the hotel distribution system would be metered for maintenance and documentation purposes.

Mechanical and Plumbing Systems

The existing central mechanical/electrical/plumbing pneumatic control system would be replaced with an electronic direct digital control (DDC) system to monitor, control, and optimize operation of all heating, ventilation, and air conditioning (HVAC) systems, and critical operation of electrical and plumbing systems. This would allow the shutdown of HVAC and lighting systems at sections of the building that are unoccupied.

Deteriorated pressure-reducing valves would be replaced where feasible, recirculating hot water would be provided at guestrooms, and all remaining galvanized steel piping would be replaced with Aquapex®.

Visitor Experience and Visitor Services

In addition to what is provided under the Actions Common to All Action Alternatives, under Alternative 2 the following elements of visitor service and related visitor experience would be improved:

Registration Lobby and Arrival Experience

As noted under ‘Accessibility Compliance’ above, Alternative 2 would remove the non-historic concierge desk and a new, accessible and portable concierge desk and check-in would be provided at the Registration Lobby.

The lounge area would be refurnished with furnishings compatible with the historic character of the hotel. In addition, the Very Significant stained concrete and rubber tile floor at the Registration Lobby would be rehabilitated.

Ahwahnee Bar

Non-historic additions at the Ahwahnee Bar would be removed. In conjunction with addressing egress from the East Wing (i.e., where the non-compliant spiral stairway egress from the second floor would be removed and a new exterior stairway constructed), the non-historic bar and kitchen prep areas would be relocated and replaced with accessible facilities on the east end of the room. On the north wall, wood-framed glass consistent with the historic character of the hotel would be installed to restore views, improve the sense of arrival at the Porte Cochere and entry gallery, and introduce more natural light into this space.

Hotel Heating, Ventilation, and Air Conditioning (HVAC) Systems

In addition to HVAC items addressed under fire/life-safety compliance, above, HVAC systems at the hotel would be upgraded and/or modified as follows:

- **South Mezzanine.** Overhead fan coil units for air conditioning and heating would be provided at the Tudor Lounge, Tresidder Room, and the Colonial Room. Natural ventilation would continue to be provided via operable doors.
- **South Wing.** Existing steam radiators would be replaced with a radiant floor for heating at the Great Lounge, Under Lounge, Solarium, Mural Room, and Winter Club Room. The radiant heating system would be installed below the existing structural concrete slab in crawlspace below; where wood floors are installed the system would be installed between the concrete slab and wood floors.

Energy Efficiency and Sustainability

In addition to the Actions Common to All Action Alternatives, Alternative 2 would provide the following energy efficiency and/or sustainability measures:

Windows and Doors

The energy efficiency of windows and doors at the hotel would be improved as follows:

- The condition of ground floor windows, frames, and doors would be surveyed, evaluated, and assessed. Caulking would be evaluated, and if necessary, carefully replaced at windows and trims. In addition, glazing would be replaced with laminated glass with a low-e film ‘sandwich’ to fit in the original window frame/trim.

Heating Systems

The hotel heating system would be improved as follows:

- The existing steam boilers at the hotel would be replaced with new high efficiency hydronic propane boilers at their current location with adequate ventilation.
- The Kitchen boiler would be eliminated and the hotel boiler capacity would be increased to service the Kitchen.
- All steam piping in the hotel would be replaced with hot water piping.
- Domestic hot water piping would be insulated.
- The existing steam to hot water exchangers and the existing domestic hot water storage tanks would be removed and replaced with two new propane domestic water heaters and three new storage tanks.
- A cogeneration electric and heat system would be provided to service the base building load and store energy for peak use.
- With the exception of the South Wing, where radiant heat would be installed, existing steam radiators at the hotel would be recommissioned for hot water heating.
- A solar hot water system would be installed to supply energy for pool heating or to supplement the hotel domestic hot water system. Solar panels would be installed on the roof of the maintenance shed, and related equipment (water tank, pipes, pumps, etc.) would be provided. [note that this system would not be installed if a photovoltaic array is installed at the maintenance shed to supply power to the hotel electrical system; see ‘Electrical Systems- Photovoltaics’ below.]
- An area would be provided for above-grade pool chemical storage, separate from the boiler room.
- A heat recovery system would be installed to recover heat from the dishwasher and potwater discharge pipes, with a recovery line tying back to the domestic hot water system.

Under Alternative 2, a geothermal system would be provided to supplement heating and cooling systems. This action would incorporate either 1) shallow geothermal tubes for preheating or cooling below the asphalt paths to the cottages or beneath the wooden entry walkway, or 2) geothermal directional bore holes in the ground.

Cooling Systems

The new chiller and cooling tower would be sized to accommodate cooling for all spaces at the hotel, as well as the cottages and dormitory. In order to provide cooling to the dormitory, the chilled water from the hotel chiller plant would be extended to a new air handling unit in the dormitory attic. In order to provide cooling to the cottages new pipes with chilled water would be extended to the cottages within a new utility corridor underneath the paved path to the cottages.

Additional work on cooling systems in public and administrative spaces would be as described above under ‘Visitor Experience and Visitor Services – HVAC Systems.’ Existing systems at the hotel and cottages would be replaced, and additional air conditioning would be provided in priority common areas at the hotel. Radiant heating would be provided in the South Wing (Great Lounge, Under Lounge, Solarium, Mural Room, and Winter Club Room).

The once-through cooling at the kitchen refrigerators would be eliminated and replaced with more energy-efficient cooling (e.g., air cooling).

Electrical Systems

In addition to proposed actions under ‘Fire/Life-Safety Compliance – Electrical Systems’, the electrical equipment at the hotel would be upgraded as follows:

- The 208-volt and 480-volt systems would be consolidated into one 480-volt service. Electrical equipment in the basement would be relocated to a modified electrical room on the north side of the Kitchen.
- The electrical distribution equipment would be replaced and moved to a new code-compliant electrical room at the new north Kitchen mezzanine.
- Per electric code, a new transfer switch would be provided in the new generator room for legally required standby systems. The switch would supply, distribute, and control power and illumination to required facilities (e.g., elevators, air conditioning and hot water circulation pumps) for both illumination and power. Under Alternative 2, the new transfer switch would also supply power from emergency generator to optional standby loads not required by code, such as domestic hot water.
- Two synchronous generators, generator switchgear, and metering would be provided as part of the proposed cogeneration system (see ‘Heating Systems’ above).

Lighting

Historic fixtures in public ground floor spaces would be refurbished to receive more efficient lamps. Light fixtures throughout the hotel would be retrofitted with additional dimming and automatic controls through a base building system to further reduce energy usage.

Exterior lighting fixtures would be modified to incorporate LED technology in conjunction with guidance provided in *Yosemite National Park Lighting Guidelines*. Interior lighting would incorporate LED technology to minimize electric loads. Historic lighting fixtures would be refurbished at ground floor public spaces.

Photovoltaics

Photovoltaic arrays would be installed on the maintenance shed, located adjacent to the hotel entry walkway, to supplement electric loads. The system would be expected to generate approximately 1500 watts of power. [note that this system would not be installed if a solar hot water system is installed on the maintenance shed roof to supplement the heating system; see ‘Heating Systems’ above.]

Plumbing Systems

New low-flow plumbing fixtures would be provided in all new installations, including the new employee locker rooms and new public restrooms. Guestroom water closets, lavatories, shower heads, and faucet aerators would be replaced at the hotel and cottages. Fixtures at the Kitchen, guest bathrooms, and dormitory bathrooms would be replaced with water conserving fixtures. Specifically:

- Guestroom toilets would be replaced with a low-flush model.
- Public restroom toilet would be replaced with a low-flush model. Urinals would be replaced with waterless urinals.

In addition, the aged sanitary system piping would be removed and replaced with new PVC piping throughout the hotel. The condition of vent piping would be evaluated and replaced as needed.

Estimated Cost and Construction Schedule

The net construction cost of Alternative 2, based on 50% schematic design (Hornberger+Worstell 2010b) is approximately \$68 million. However, actual costs of implementing projects within this plan would depend on funding availability. Prioritization criteria have been developed to inform the construction phasing strategy for long-term implementation of the Comprehensive Rehabilitation Plan based on correcting urgent deficiencies, critical deficiencies, and necessary corrections and taking into consideration the interdependency of actions based on proximity, operational logistics, or related structural or functional actions.

The cost estimate is based on the assumption that The Ahwahnee would be closed for approximately 30 months to implement the proposed work. However, this assumption was made for costing purposes only. Ultimately, the time needed to implement this alternative may be up to 20 years, depending on the availability of funding.

Alternative 3 (Preferred)

Overview

Alternative 3, the NPS preferred alternative, comprises actions in the Actions Common to All Action Alternatives, actions selected from either or both of Alternative 1 and Alternative 2, or actions developed separately. The overall goals of this alternative are to provide the most cost-efficient means of addressing fire, seismic, life-safety, health, and accessibility code and standard deficiencies; improving obsolete building systems and operational efficiency; and improving visitor experience while minimizing impacts on historic fabric and features to the maximum extent practicable. Alternative 3 proposes the same scope of historic rehabilitation as described for Alternative 1.

For a summary of the work proposed under Alternative 3, please see Table 2-1. For the locations of actions, please see Figures 2-1 through 2-6. A detailed depiction of proposed major work items is included as Appendix B.

Fire/Life-Safety Compliance

In addition to the Actions Common to All Action Alternatives, Alternative 3 would implement the following to address fire/life-safety deficiencies:

Egress

As in Alternative 2, a new exterior exit would be constructed at the South Mezzanine in the Tresidder Room to meet fire code egress requirements. The path of egress would require constructing a new exterior door at the north side of the Tresidder Room to access an exterior stairway from the second floor to the ground floor (Appendix B, Figure B-6).

As in Alternative 1, the non-compliant spiral stairway egress from the second floor at the East Wing would be modified to join a new landing on the mezzanine level, and a new compliant interior stairway would be constructed from the mezzanine landing to the ground floor (Appendix B, Figure B-1). Additional actions associated with this stairway include reconfiguration of the Ahwahnee Bar (see ‘Visitor Experience’, below) and the addition of two accessible guestroom suites, one of which would have an accessible balcony (see ‘Accessibility Compliance’, below).

Vertical Shafts and Linen Facilities

As in Alternative 1, compliance with fire code at guestroom shafts would be addressed by properly sealing the bottom of shafts, providing a fire damper or ducted boot at each toilet exhaust grille at the main exhaust shaft, and repairing ductwork in the attic spaces.

As in Alternative 1, a two-hour wall assembly surrounding the Linen Room and a new rated door to the Linen Room would be installed to meet fire separation requirements.

Fire Department Access

Hotel locks would be re-keyed to a new master key system in order to provide more efficient access for emergency personnel.

Electrical Systems

Code compliance issues with the existing electrical system at the hotel would be addressed by providing the following:

- **Distribution panels:** As in Alternative 1, the floor of the existing main switchboard and generator room would be raised above grade to avoid flooding damage during heavy spring runoff or during heavy rains. Waterproofing at the basement distribution room would be upgraded, and a new sump pump would be installed to prevent water from entering the room.
- **Conduits/Raceways:** As in Alternative 2, corroded conduit feeders under the Kitchen would be replaced with material suitable for wet conditions. In addition, where it is accessible or in conjunction with other work performed under this plan, old cloth-wrapped wiring would be abandoned and replaced with code-compliant metal-clad cable.

Ventilation and Exhaust Systems

Code compliance issues with the existing ventilation and exhaust systems at The Ahwahnee would be addressed by providing the following:

- **Guestrooms:** As in Alternative 1, natural ventilation, through operable windows, would remain.
- **Guestroom Corridors:** As in Alternative 2, a new corridor ventilation system would be provided.
- **Guest Bathrooms:** As in Alternative 2, fire dampers or sub ducts at each toilet exhaust grille and new toilet exhaust fans would be provided.
- **Electrical Room and Elevator Penthouse:** As in Alternative 2, ventilation and cooling systems would be provided to the existing and new electrical rooms. A permanent cooling system would be provided with an exterior vent through an existing opening.
- **Public and Employee Spaces:** As in Alternative 2, new exhaust and make-up air systems would be provided at public restrooms, Ahwahnee dormitory restrooms, and linen rooms.

Seismic Safety Recommended Practice and Structural Strengthening

In addition to the Actions Common to All Action Alternatives, Alternative 3 would provide the following to address seismic safety and/or structural strengthening issues:

Dining Room

As in Alternative 1, the Dining Room would be braced in the north-south direction to a new minimally-sized mezzanine on the south side of the Kitchen. The mezzanine would include a deck that would meet cleanable ceiling code requirement over cooking areas, minimize the reconfiguration of the north mezzanine Kitchen areas, and accommodate employee accessibility needs. This action would require new foundations in the Kitchen crawl space, a new partial floor slab, and an elevated slab above the Kitchen (Appendix B, Figure B-3).

Stone Chimneys

As in Alternative 2, stone chimneys at the hotel would be reinforced with interior core steel bracing and a concrete collar in the attic, at the base of the stone veneer.

South Wing Interior Walls

As in Alternative 1, because it is not required for life-safety under recommended industry practice, no work would be performed to address the potential seismic damage from lack of shear walls at the Great Lounge and Solarium.

Exterior Walls

As in Alternative 1, stainless steel pins would be inserted through mortar joints to anchor the historic exterior granite veneers above hotel egress paths.

Porte Cochere

As in Alternative 2, the entry walkway and the Porte Cochere would be stiffened by tying them to an adjacent, reconstructed maintenance shed (see ‘Operational Efficiency - Maintenance Shed’ below).

Mechanical, Electrical, and Plumbing Equipment

As in Alternative 2, mechanical, electrical, and plumbing equipment would be anchored, braced, or strengthened, including: elevator equipment, boilers, electrical transformers, fire sprinkler piping, kitchen and food service equipment, emergency lighting and power systems, HVAC equipment, fuel tanks, laundry equipment.

Accessibility Compliance

In addition to the Actions Common to All Action Alternatives, Alternative 3 would provide the following to address ADA-ABA code deficiencies:

Main Entry and Ground Floor Entrances

As in Alternative 2, the main entry to the hotel would be provided with automatic door openers and compliant thresholds. As in Alternative 1, the existing hardware and thresholds at other selected ground floor entrances/exits would be provided with reversible ramps and compliant door hardware.

South Mezzanine Meeting Rooms

As in Alternative 1, a limited use-limited access elevator would be installed at the Solarium to provide access to the South Mezzanine meeting rooms in order to comply with federal ADA-ABA standards. The beam and slab at the ground floor would be modified below the elevator to install a suspended pit structure. Portions of the existing walls and structure would be removed and the structure altered to accommodate the new elevator and elevator enclosure. This action would coincide with shear wall installation in the Elevator Lobby and Solarium (Appendix B, Figure B-9).

Registration Lobby

As in Alternative 2, the existing hotel registration area would be modified to meet current ADA-ABA standards. Specifically, the non-historic concierge counter would be removed and replaced with furnishings and a desk for accessible concierge service and accessible check-in.

Restrooms

Under Alternative 3, the men’s public restroom on the ground floor would be expanded into the existing location of administrative offices. The women’s public restroom on the mezzanine level would be expanded to increase the fixture count and provide accessibility. A unisex restroom would be provided on the ground floor adjacent to the men’s public restroom. An additional, escorted-access-only accessible unisex restroom would be provided for public use within the

footprint of the maintenance building (see ‘Operational Efficiency – Porte Cochere and Maintenance Shed,’ below).

Guestrooms

Alternative 3 would add two accessible guestrooms to the hotel as required per ADA-ABA code. As in Alternatives 1 and 2, in conjunction with replacing the East Wing spiral stair, East Wing guestrooms #106 and #107 would be combined into one accessible suite with a new accessible terrace constructed over the new Ahwahnee Bar kitchen (Appendix B, Figure B-5).

As in Alternative 1, East Wing guestrooms #206 and #207 also would be combined into one accessible suite on the second floor.

Historic Rehabilitation

Historic rehabilitation actions under Alternative 3 would be the same as those in the ‘Actions Common to All Action Alternatives’ section.

Operational Efficiency

In addition to the Actions Common to All Action Alternatives, Alternative 3 would provide the following to address operational efficiency:

Kitchen Facilities

The existing equipment at the Kitchen would be removed to implement the work proposed in the Kitchen area for compliance with fire/life-safety codes, seismic and structural standards, and accessibility requirements. The reinstallation of kitchen equipment would meet current mechanical, electric, and plumbing codes, health codes, and ADA-ABA accessibility standards. As in Alternative 1, a new more efficient layout with code-compliant features (e.g., code-required sanitary wall, floor and ceiling finishes) would be provided. Existing equipment under the north mezzanine (refrigerators and coolers) would be retained and reused when possible.

The electrical systems that support the Kitchen would be upgraded to a 480-volt system using electrical panels located in a dedicated room within the Kitchen.

The existing exhaust fans and the make up heating and ventilation air handling units would be refurbished, modified, and reused as much as possible in the new Kitchen layout. The hot water propane boiler would be reused.

‘Back of House’ Facilities

As in Alternative 1, new banquet/chef offices would be located in the new Kitchen mezzanine in approximately the same square footage as the existing facility. Laundry facilities would be reorganized in their current location, and mechanical rooms would remain in their existing locations.

Porte Cochere and Maintenance Shed

As in Alternative 2, the existing non-historic maintenance shed would be removed and a new maintenance shed structure would be constructed that ties into and stiffens the Porte Cochere and entry walkway (see ‘Seismic Safety Recommended Practice and Structural Strengthening’, above). The historic entry walkway would be retained and preserved. Service parking would be retained on the east side of the building.

The new interior of the maintenance shed would include additional storage for the Gift Shop, a work area, enclosed garbage and recycling spaces, and an enlarged luggage and valet/bell area. An additional, escorted-access-only unisex bathroom would be provided for public use within the footprint of the maintenance building.

As in Alternative 1, vertical clearance at the Porte Cochere would remain at 11.5 feet.

Electrical Systems

As in Alternative 2, the existing main point of entry (MPOE) for the telecommunications services at the hotel would be relocated near the electrical service point within the footprint of the hotel. The area would be on the ground floor in the Kitchen.

As in Alternative 2, the electrical systems at The Ahwahnee dormitory would be fully upgraded to match the load of the dormitory. Electrical equipment would remain in their existing locations. New or retrofitted equipment, including outlets, receptacles, and light switching would comply with current electric code and ADA-ABA requirements. All dormitory lighting would be removed and upgraded. In addition, new dormitory electrical service from the hotel distribution system would be metered for maintenance and documentation purposes.

Mechanical and Plumbing Systems

As in Alternative 2, the existing central mechanical/electrical/plumbing pneumatic control system would be replaced with an electronic direct digital control (DDC) system to monitor, control, and optimize operation of all heating, ventilation, and air conditioning (HVAC) systems, and critical operation of electrical and plumbing systems. This would allow the shutdown of HVAC and lighting systems at sections of the building that are unoccupied.

As in Alternative 2, deteriorated pressure reducing valves would be replaced where feasible, recirculating hot water would be provided at guestrooms, and all remaining galvanized steel piping would be replaced with Aquapex®.

Visitor Experience and Visitor Services

In addition to what is provided under the Actions Common to All Action Alternatives, under Alternative 3 the following elements of visitor service and related visitor experience would be improved:

Registration Lobby and Arrival Experience

As in Alternative 2 and as noted under ‘Accessibility Compliance’ above, the non-historic concierge desk would be removed and a new, accessible and portable concierge desk and check-in would be provided at the Registration Lobby.

The lounge area would be refurnished with furnishings compatible with the historic character of the hotel. In addition, the Very Significant stained concrete and rubber tile floor at the Registration Lobby would be rehabilitated.

Ahwahnee Bar

Under Alternative 3, non-historic additions at the north and east walls of the Ahwahnee Bar would be removed. The non-historic bar and service areas would be relocated and remodeled with accessible facilities on the east side of the room. The remodel of service facilities would be coordinated with the action to provide a code-compliant exit stair from the second floor (see

‘Fire/Life-Safety Compliance’, above) and two additional accessible guestrooms on the first and second floors (see ‘Accessibility Compliance’, above). On the north wall, wood framed glass consistent with the historic character of the hotel would be installed to restore views, improve the sense of arrival, and introduce more natural light into the space.

Energy Efficiency and Sustainability

In addition to the Actions Common to All Action Alternatives, Alternative 3 would provide the following energy efficiency and/or sustainability measures:

Windows and Doors

As in Alternative 1, the condition of ground floor windows, frames, and doors would be surveyed, evaluated, and assessed. Caulking would be evaluated, and if necessary, carefully replaced at windows and trims.

Heating Systems

As in Alternative 1, the hotel heating system would be improved as follows:

- The existing steam boilers at the hotel would be replaced with new high-efficiency steam boilers at their current location.
- All steam piping in the hotel would be replaced.
- Domestic hot water piping would be insulated.
- Existing steam radiators at the hotel would be reused, repaired, or refurbished as needed.
- The existing heat exchangers for domestic hot water and pool heating hot water would be retained.
- The number of outdoor air louvers at the boiler room would be increased for code compliance.
- The existing domestic hot water storage tanks would be replaced with new insulated hot water storage tanks.
- The existing heat condensate loop would be closed.

As in Alternative 2, a heat recovery system would be installed to recover heat from the dishwasher and potwater discharge pipes, with a recovery line tying back to the domestic hot water system.

Cooling Systems

The once-through cooling at the kitchen refrigerators would be eliminated and replaced with more energy-efficient cooling (e.g., air cooling).

Electrical Systems

In addition to proposed actions under ‘Fire/Life-Safety Compliance – Electrical Systems,’ above, the electrical equipment at the hotel would be upgraded as follows:

- As in Alternative 2, the 208-volt and 480-volt systems would be consolidated into one 480-volt service. Electrical equipment in the basement would be relocated to a modified electrical room on the north side of the Kitchen.
- As in Alternative 2, the electrical distribution equipment would be replaced and moved to a new code-compliant electrical room at the new north Kitchen mezzanine.

- As in Alternative 1, per electric code, new transfer switches would be provided in a reconfigured emergency generator room; the switch will supply, distribute, and control power and illumination essential for safety to human life (e.g., egress pathways and exit signs).
- As in Alternative 1, per electric code, a new transfer switch would be provided in the new generator room for legally required standby systems. The switch would supply, distribute, and control power and illumination to required facilities (e.g., elevators, air conditioning and hot water circulation pumps) for both illumination and power.

Lighting

As in Alternative 1, exterior lighting fixtures would be modified to incorporate LED technology in conjunction with guidance provided in *Yosemite National Park Lighting Guidelines*. Interior lighting would incorporate LED technology to minimize electric loads. Historic lighting fixtures would be refurbished at ground floor public spaces.

Plumbing Systems

New low-flow plumbing fixtures would be provided in all new installations, including the new employee locker rooms and new public restrooms. Guestroom water closets, lavatories, shower heads, and faucet aerators would be replaced at the hotel and cottages. Fixtures at the Kitchen, guest bathrooms, and dormitory bathrooms would be replaced with water conserving fixtures. Specifically:

- As in Alternative 1, guestroom toilet valves would be replaced with a low flush model where possible, and toilets that are not low-flow would be replaced.
- As in Alternative 1, public restroom toilet flush valves would be replaced with a low-flush model. Urinals would be replaced with a low-flush model.

Estimated Cost and Construction Schedule

The net construction cost of Alternative 3, based on 50% schematic design (Hornberger+Worstell 2010b) is approximately \$52 million. However, actual costs of implementing projects within this plan would depend on funding availability. Prioritization criteria have been developed to inform the construction phasing strategy for long-term implementation of the Comprehensive Rehabilitation Plan based on correcting urgent deficiencies, critical deficiencies, and necessary corrections and taking into consideration the interdependency of actions based on proximity, operational logistics, or related structural or functional actions.

The cost estimate is based on the assumption that The Ahwahnee would be closed for approximately 24-30 months to implement the proposed work. However, this assumption was made for costing purposes only. Ultimately, the time needed to implement this alternative may be up to 20 years, depending on the availability of funding.

Table 2-1
Summary Description of the No Action and Action Alternatives

Action Evaluated	No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
FIRE/LIFE-SAFETY COMPLIANCE				
Second means of egress from South Mezzanine meeting rooms	No secondary egress; no allowed public use; employee use only in Colonial & Tudor Rooms, with maximum total of 30 or less.	No secondary egress; no allowed public use; employee use only in Colonial & Tudor Rooms, with maximum total of 30 or less.	Secondary egress constructed with new exterior exit from Tresidder Room to new south stair.	Same as Alternative 2.
Code compliant egress at east spiral stair (second floor to ground floor)	Retain non-compliant spiral stair fire escape.	Remove existing spiral stair. Construct new interior stair from second to first floor; reduces guestrooms by 2 rooms. Provide new exterior exit stair from first floor to ground floor.	Remove existing spiral stair. Construct new exterior stair from second and first floors to ground; requires reconfiguration of 2 guestrooms.	Same as Alternative 1, however configuration of the egress would be combined with Alternative 2 action to reconfigure Ahwahnee Bar (see Visitor Experience, below).
Fire separation between Dining Room and hotel	No fire separation provided.	Provide concealed overhead fire doors at openings at Dining Room entry, Kitchen door, and Diggins Suite. Confirm rating of existing walls.	Same as Alternative 1.	Same as Alternative 1.
Code condition of service elevator for fire separation, controls, gurney and accessibility	Existing non-compliant service elevator and shaft to remain as-is.	Retain existing elevator cab and replace existing service side pocket door and cage. Maintain tilt-up gurney on site to address gurney requirements in existing cab retrofit.	Same as Alternative 1.	Same as Alternative 1.
Fire protection of steel members in attic spaces	Retain current level of fire protection.	Remove damaged material as necessary and reapply new fire protection at attics.	Same as Alternative 1.	Same as Alternative 1.
Non-rated vertical chase shafts; improve code compliance	Retain non-compliant, non-rated shafts.	Seal shafts at bottom and provide ducted boot at each toilet exhaust.	Provide fully metal ducted system through shaft. Install wood blocking or fire-safing at all floor penetrations.	Same as Alternative 1.
Linen chute and linen room	Retain non-compliant linen room and laundry chute.	Improve fire resistance of shaft per vertical shaft protection and improve first floor linen room.	Improve fire resistance of shaft per vertical shaft protection; expand and improve first floor linen room.	Same as Alternative 1.
Fire department access to hotel	Retain non-compliant access to cottages.	Prevent vehicle access on historic concrete terraces and improve base of adjacent green areas to support truck load, code-compliant width, and code-required turnaround.	Same as Alternative 1.	Same as Alternative 1.
Fire department access to cottages	Retain non-compliant access to cottages.	Remove select trees, regrade existing road and improve surface (gravel/pervious paving).	Same as Alternative 1.	Same as Alternative 1.

**Table 2-1
Summary Description of the No Action and Action Alternatives (continued)**

Action Evaluated	No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
FIRE/LIFE-SAFETY COMPLIANCE (CONTINUED)				
Master key system for emergency access to all hotel spaces	Retain multi-key system.	Re-key hotel locks on new master key system.	Provide new electronic key card devices in existing door compatible with historic character.	Same as Alternative 1.
Electrical: water intrusion at distribution panels in basement	Maintain status quo conditions.	Retain existing main electrical distribution room in current location; provide full waterproofing and new secondary sump pump.	Relocate main electrical distribution room to new waterproof location. Provide new waterproofing at basement.	Same as Alternative 1.
Electrical: water intrusion at emergency generator room from lowered 18" slab	Maintain status quo conditions.	Raise floor slab inside generator room to be above grade.	Same as Alternative 1.	Same as Alternative 1.
Electrical: improper grounding for electrical system	Maintain non-grounded electrical system.	Ground main electrical panels.	Ground main electrical panels and provide new grounded systems and short-circuit protection with upgrade of electrical system where accessible.	Same as Alternative 2.
Electrical: deteriorating cloth wiring and conduit	Maintain current wiring.	Replace corroded conduit runs in Kitchen w/ material suitable for wet conditions.	Replace accessible cloth wiring with code compliant MC Cable. Replace corroded conduit runs in Kitchen with material suitable for the wet conditions.	Same as Alternative 2.
Ventilation and Exhaust: guestroom corridor ventilation	Retain inoperable corridor ventilation system.	Refurbish existing ventilation system and provide proper make-up air with fire smoke damper at each level.	Provide new corridor ventilation system.	Same as Alternative 1.
Ventilation and Exhaust: electrical room ventilation	Retain non-compliant ventilation.	Provide ventilation and cooling to existing and new electrical rooms.	Same as Alternative 1	Same as Alternative 1.
Ventilation and Exhaust: elevator machine room ventilation	Retain non-compliant ventilation.	Provide chiller water fan coil for AC the elevator machine room.	Provide permanent AC unit with exterior vent through existing window opening.	Same as Alternative 2.
Ventilation and Exhaust: Mechanical: hotel guest bathroom exhaust fans	Retain existing exhaust fans.	Refurbish existing toilet exhaust fans and discharge locations. Provide fire dampers or sub-ducts for every toilet room.	Provide new toilet exhaust fans. Provide fire dampers or sub-ducts for every toilet room.	Same as Alternative 2.
Ventilation and Exhaust: hotel public and 'back of house' exhaust fans	Retain existing exhaust fans.	Upgrade exhaust venting to public restrooms.	Provide new exhaust and make-up air to public restrooms, dormitory restrooms, and laundry linen rooms.	Same as Alternative 2.

Table 2-1
Summary Description of the No Action and Action Alternatives (continued)

Action Evaluated	No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
FIRE/LIFE-SAFETY COMPLIANCE (CONTINUED)				
Mechanical: natural air ventilation	Retain existing natural ventilation.	(No Work)	Provide new mechanical ventilation AHU including shafts, ductwork, dampers, outside air grills.	Same as Alternative 1.
Fire detection, alarms, and suppression systems at cottages and dormitory	Retain non-compliant fire detection, alarms, and suppression systems.	Extend new fire sprinkler, detection, and fire alarm systems to cottages and dormitory.	Same as Alternative 1.	Same as Alternative 1.
SEISMIC SAFETY RECOMMENDED PRACTICE AND STRUCTURAL STRENGTHENING				
Brace Dining Room from Kitchen Side	Do not stabilize Dining Room.	Provide brace frame with minimally sized south Kitchen mezzanine with a deck that: meets cleanable ceiling code requirement over cooking areas, minimizes reconfiguration of north mezzanine Kitchen areas and accommodates employee accessibility needs.	Provide brace frame with partial south Kitchen mezzanine and deck in Kitchen that meets cleanable ceiling code requirement over cooking areas and accommodates employee accessibility needs.	Same as Alternative 1.
Dining Room columns and granite veneer	Do not stabilize columns or veneer.	Cap columns at west side, brace Dining Room in east-west direction and pin stone veneer on columns at east side.	Same as Alternative 1.	Same as Alternative 1.
Dining Room / Solarium glazing	Do not alter glazing.	Install glazing that meets seismic life-safety requirements without altering the original window frame profile.	Same as Alternative 1.	Same as Alternative 1.
Dining Room roof static load	Retain existing truss.	Replace splice plate connections at truss and incorporate new snowmelt/retention at roof.	Same as Alternative 1.	Same as Alternative 1.
Kitchen Floor Slab	Retain deteriorating floor slab.	Replace deteriorated sections of slab subject to failure and as needed for seismic upgrade; replace all flooring tiles.	Same as Alternative 1.	Same as Alternative 1.
Stone chimneys (hotel)	Do not stabilize chimneys.	Provide exterior collar strap with guy wires	Provide internal core steel bracing with concrete ring in attic.	Same as Alternative 2.
Stone chimneys (cottages)	Do not stabilize chimneys.	Provide 2x blocking, clips and straps in existing attic space.	Same as Alternative 1.	Same as Alternative 1.
Tall gypsum block walls in Great Lounge	Do not brace gypsum block walls.	Tie gypsum block wall at floor lines with internal steel frame.	Same as Alternative 1.	Same as Alternative 1.
South Wing Shear Walls	Do not add shear walls.	(No Work)	Provide four shear walls at Solarium and Elevator Lobby.	Same as Alternative 1.

**Table 2-1
Summary Description of the No Action and Action Alternatives (continued)**

Action Evaluated	No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
SEISMIC SAFETY RECOMMENDED PRACTICE AND STRUCTURAL STRENGTHENING (CONTINUED)				
Exterior Granite Veneer	Do not pin exterior granite.	Provide stainless steel pins for exterior granite veneer above egress paths only.	Provide stainless steel pins at all exterior granite veneer.	Same as Alternative 1.
Seismic joint between Porte Cochere and entry canopy interface	Do not alter Porte Cochere.	(No Work)	Tie entry canopy and Porte Cochere together and stiffen using new connections to a new maintenance shed. Or create seismic slip joint / separation at Porte Cochere and entry walkway; do not raise Porte Cochere height.	Same as Alternative 2.
Anchoring of Major Equipment	Do not anchor equipment.	(No Work)	Brace MEP equipment and provide joints at utility lines.	Same as Alternative 2.
ACCESSIBILITY COMPLIANCE				
Accessibility to hotel main front doors	Maintain current front entrance doors.	(No Work)	Provide automatic door operators and thresholds in a historically acceptable manner.	Same as Alternative 2.
Accessibility to other public ground floor exterior entrances	Retain existing ground floor egress thresholds and doors.	Provide reversible ramps and hardware at selected entrances.	Repair / reconstruct door assemblies with compliant hardware and permanent thresholds/ramps at selected entrances.	Same as Alternative 1.
Access to South Mezzanine meeting rooms	Do not provide ADA-compliant access to South Mezzanine.	Provide limited use-limited access (LULA) elevator in existing storage closet space and re-route Mezzanine stair.	Provide LULA elevator in footprint at Under Lounge across from existing storage closet.	Same as Alternative 1.
Number of accessible guestrooms	Do not provide equal facilitation for ADA-compliant guestroom with balcony; do not replace former ADA-compliant suite at Room 607 (reconfigured to non-ADA room during 2011 6th floor egress stair construction)	Provide two additional accessible guestroom suites in the East Wing, one with an accessible balcony over Ahwahnee Bar kitchen.	Provide two additional accessible guestrooms – a standard room on the fourth floor and a suite with accessible balcony.	Same as Alternative 1.
Accessibility / equal facilitation to public restrooms	Maintain current restrooms.	Maintain men's restroom as-is. Expand women's restroom on mezzanine to increase fixture count and maintain accessibility. Provide unisex restroom on ground floor.	Maintain existing women's room and provide supplemental accessible women's room on the ground floor. Reconfigure men's room to increase fixture count.	Expand men's restroom into administrative offices (no Gift Shop Storage). Expand women's restroom on mezzanine to increase fixture count and maintain accessibility. Provide unisex restroom on the ground floor adjacent to the men's restroom.

Table 2-1
Summary Description of the No Action and Action Alternatives (continued)

Action Evaluated	No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
ACCESSIBILITY COMPLIANCE (CONTINUED)				
Accessibility at Front Desk / Concierge / Lobby	Retain current lobby configuration and furnishings.	Confirm/retrofit existing drop down counter at front desk reception to allow for accessible check-in. Replace non-historic concierge counter w/ furnishings/desk for concierge service.	Replace non-compatible concierge counter with furnishing desk for accessible check-in and concierge. Provide accessible check-in at concierge.	Same as Alternative 2.
Accessible parking and path of travel and wayfinding	Retain current ADA parking spaces; existing signage to remain.	Increase number of ADA spaces to 7 and improve drainage/path of travel from parking to hotel entrance; Provide new signage throughout designated path of travel.	Same as Alternative 1.	Same as Alternative 1.
Accessibility of employee facilities: egress, lockers, changing, breakroom, etc.	Maintain current employee facilities.	South Kitchen mezzanine would allow for new employee facilities above Kitchen.	Same as Alternative 1.	Same as Alternative 1.
Improve path of travel to major site features	Maintain current path of travel.	Provide new accessible, historically compatible hardscape path over new utility corridor. Extend new accessible hardscape path to Wedding Lawn from Solarium Terrace.	Same as Alternative 1.	Same as Alternative 1.
OPERATIONAL EFFICIENCY				
Kitchen layout and efficiency	Retain current Kitchen layout.	Reuse as much existing equipment as feasible in new efficient main Kitchen layout; maintain existing north Kitchen (refrigerators and mezzanine) as much as possible.	Provide new efficient Kitchen layout with new Energy-Star equipment. Remove existing refrigerators and mezzanine to build new north Kitchen mezzanine. Salvage existing historic cooler doors and reinstall on new refrigerators.	Same as Alternative 1.
'Back of house' facilities	Retain current locker rooms.	Provide locker room / employee breakroom on new partial south Kitchen mezzanine.	Provide locker rooms, offices, breakroom, service elevator and mechanical/electrical room on new partial south and new partial north mezzanine	Same as Alternative 1.
Banquet/chef offices	Retain current offices.	Provide limited sized offices.	Provide new offices.	Same as Alternative 1.
Laundry facilities	Retain current laundry facilities.	Reorganize laundry facilities in their existing location.	Same as Alternative 1.	Same as Alternative 1.
Mechanical rooms	Retain current mechanical rooms.	Retain mechanical rooms at their existing location.	Provide a new mechanical room on the ground floor.	Same as Alternative 1.

**Table 2-1
Summary Description of the No Action and Action Alternatives (continued)**

Action Evaluated	No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
OPERATIONAL EFFICIENCY (CONTINUED)				
Kitchen mezzanine elevator and stairs	Retain current north Kitchen mezzanine stair.	Provide new egress stair to the ground floor.	Provide new egress stair and elevator for accessibility.	Same as Alternative 1.
General Manager, managers, and business office locations	Retain current office locations.	Relocate hotel management office spaces to reconstructed Gift Shop mezzanine.	Same as Alternative 1.	Same as Alternative 1.
Maintenance shed, bag storage / valet service station / bell station and maintenance storage and shops	Retain existing maintenance shed, maintain current bell facilities, maintain current storage and work spaces.	(No Work)	Replace maintenance shed with new enclosure and expanded program; retain and preserve historic Entry Walkway façade; provide new bag storage and valet/bell stations; provide new storage/shop for current functions.	Replace maintenance shed with new enclosure and expanded program; retain and preserve historic Entry Walkway façade. Maintain service vehicle parking; provide new bag storage & valet/bell stations; provide new storage/shop for current functions plus service parking.
Gift Shop / retail storage	Gift Shop and retail storage remain on dock and mezzanine.	(No Work)	Provide new permanent storage for current Gift Shop needs.	Same as Alternative 2.
Public toilets	No additional public restroom.	(No Work)	Provide unisex restroom.	Provide escorted-access-only unisex restroom.
Porte Cochere access for buses	Tour buses would continue to drop off visitors in the parking lot.	(No Work)	Raise Porte Cochere to provide 13'-0" clear bus access.	Same as Alternative 1.
Electrical: electrical systems at dormitory	Maintain existing.	Upgrade only areas where rehabilitation work is proposed.	Provide full upgrade of dormitory electrical systems.	Same as Alternative 2.
Electrical: Main Point of Entry (MPOE) room for telecommunications	Maintain current MPOE.	(No Work)	Provide new MPOE room and connections in dedicated room.	Same as Alternative 2.
Mechanical: Mechanical, Electrical, and Plumbing (MEP) equipment in Kitchen	Retain existing MEP equipment in Kitchen.	Re-use and relocate existing MEP equipment as much as possible. Upgrade as necessary in existing layout.	Reuse and relocate Kitchen ductwork, fans as feasible per new Kitchen layout; provide new propane boiler.	Same as Alternative 1.
Mechanical: central MEP control system (DDC System)	Retain manual controls.	Provide a microprocessor-based DDC system to monitor, control and optimize operation of major HVAC systems and critical operation of electrical and plumbing systems.	Provide a microprocessor-based DDC system to monitor, control and optimize operation to all HVAC, electrical and plumbing systems	Same as Alternative 2.
Plumbing: domestic hot water piping grade	Maintain current hot water piping.	Replace deteriorated pressure valves where feasible. Provide recirculating hot water at guestrooms.	Replace valves, where feasible provide recirculating hot water at guestrooms, and replace all galvanized piping w/ Aquapex.	Same as Alternative 2.
Basement waterproofing	No upgrades to waterproofing.	Provide new waterproofing throughout basement.	Same as Alternative 1.	Same as Alternative 1.

Table 2-1
Summary Description of the No Action and Action Alternatives (continued)

Action Evaluated	No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
HISTORIC REHABILITATION				
Hotel and cottage preservation and rehabilitation	Maintain current condition of historic fabric and features.	Rehabilitate / stabilize features of hotel in 'poor' condition. Preserve and rehabilitate features in Very Significant and Significant spaces in 'fair' condition. Rehabilitation work associated directly with other actions affecting historic fabric or features in the hotel and cottages.	Same as Alternative 1, plus implement non-maintenance HSR treatment recommendations for the hotel and cottages for features /fabric in Contributing and Historic Utilitarian spaces.	Same as Alternative 1.
VISITOR EXPERIENCE AND VISITOR SERVICES				
Sweet Shop	Retain current Sweet Shop.	Maintain existing Sweet Shop and repair finishes in place.	Same as Alternative 1.	Same as Alternative 1.
Ahwahnee Bar	Retain current Ahwahnee Bar.	Move bar and bar kitchen to north end; restore finishes and add glazing at east wall.	Remove non-historic additions / finishes; replace with new wood framed glass wall and remodel service areas.	Remove non-historic additions / finishes; replace with new wood framed glass at north wall and remodel service areas with coordinated exit stair from second floor east wing. Provide compatible multi-use storage addition along east wall.
Dining Room: east end	Maintain as is.	Maintain spaces as-is; rehab historic finishes (i.e., wainscot and wall surfaces at wine bar / service bar).	Remove non-historic service bar / reconstruct wine bar and space divider with free standing furniture pieces.	Same as Alternative 2.
Reception area	Maintain as is.	(No Work)	Optimize configuration.	Same as Alternative 2.
Service spaces / coat room	Maintain as is.	(No Work)	Reconfigure for extra capacity.	Same as Alternative 1.
Wine bar area / wine storage	Maintain as is.	Remove non-historic grill above service bar, rehab wainscot and wall surfaces, restore/replace two ceiling lights.	Same as Alternative 1.	Same as Alternative 1.
Lobby and guest arrival experience	Maintain as is.	Remove built-in counter and provide moveable desk for concierge.	Remove built-in concierge desk; provide removable accessible furniture for check-in and concierge near Sweet Shop.	Same as Alternative 2.
Mechanical: HVAC capacity and ventilation to ground floor public spaces	Retain current HVAC system for public spaces.	Replace existing fan coil units. Maintain existing capacity.	Replace existing fan coil units. Increase capacity to service main public ground floor areas where other actions provide the opportunity.	Same as Alternative 1.
Mechanical: hotel guestroom air conditioning systems	Retain current AC system for guestrooms.	Replace AC system with new 4-pipe fan coil units.	Same as Alternative 1	Same as Alternative 1.
Mechanical: cottage guestroom: air conditioning systems	Retain current AC system for cottages.	Replace w/ new 4-pipe fan coil units tied to the main building.	Same as Alternative 1.	Same as Alternative 1.

Table 2-1
Summary Description of the No Action and Action Alternatives (continued)

Action Evaluated	No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
VISITOR EXPERIENCE AND VISITOR SERVICES (CONTINUED)				
Passenger elevator	Retain passenger elevator as is.	Rehabilitate non-historic cab interior and replace with design finishes and fixtures compatible with historic character.	Same as Alternative 1, plus: replace hoistway components and equipment that cannot be refurbished.	Same as Alternative 2.
ENERGY EFFICIENCY AND SUSTAINABILITY				
Existing steam system	Continue current maintenance practices.	Perform a thorough inspection of the fuel oil/steam system and eliminate leaks.	Same as Alternative 1.	Same as Alternative 1.
Insulation at building envelope, systems and equipment: attic and roof spaces, exterior walls	No new insulation.	Install rigid Insulation under roof and attach/adhere (waterproof) insulation to underside of slab at crawl space.	Same as Alternative 1, plus inject foam into perimeter guestroom walls.	Same as Alternative 1.
Insulation at refrigerator boxes	No new insulation.	Add additional insulation at refrigerator boxes. Preserve historic freezer doors.	Same as Alternative 1.	Same as Alternative 1.
Provide new insulation at piping (domestic hot water/steam pipes)	No new insulation.	Add pipe insulation at pipes in easy to access locations (i.e. crawlspace, riser shafts) and wherever piping is replaced.	Same as Alternative 1.	Same as Alternative 1.
Provide weather-stripping at existing wall accessories/ penetrations	No new insulation.	Provide foam/sealant behind outlets, fixtures, pipe voids, etc.	Same as Alternative 1.	Same as Alternative 1.
Guestroom windows	Retain existing windows.	Remove existing aluminum guestroom windows and replace with historically compatible wood-framed, double paned insulated, low-e casement windows.	Same as Alternative 1.	Same as Alternative 1.
Ground floor windows	Maintain existing windows.	Survey and carefully evaluate and replace caulking at windows and trims.	Survey and carefully evaluate and replace caulking and existing glazing with laminated glass with low-e film "sandwich" to fit in same profile of existing frame/trim.	Same as Alternative 1.
Ground floor doors	Maintain existing doors.	Rehabilitate doors where possible to close leaks. Replace with historically compatible door when necessary.	Same as Alternative 1.	Same as Alternative 1.

Table 2-1
Summary Description of the No Action and Action Alternatives (continued)

Action Evaluated	No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
ENERGY EFFICIENCY AND SUSTAINABILITY (CONTINUED)				
Mechanical: domestic hot water and space heating are tied into same boiler system	Retain current domestic hot water and space heating systems.	Replace heat exchanger tanks with new hot water storage tanks in same location.	Maintain separate heating sources for building space heating and domestic hot water. Use Co-Gen Electricity and heat system to service the base building load and store energy for peak use.	Same as Alternative 1.
Mechanical: space heating	Retain inefficient steam boilers.	Replace steam boilers with high-efficiency condensate steam boilers and close condensate loop.	Replace steam boilers with high-efficiency clean propane boilers. Replace steam pipe with hot water pipe.	Same as Alternative 1.
Mechanical: chiller / cooling Tower equipment is inefficient and not installed per mfg's recommendations	Retain inefficient and incorrectly installed chiller and cooling tower.	Replace existing chiller and cooling tower with high efficiency equipment and non-HCFC refrigerant. Operate new chiller and cooling tower at higher water efficiency cycles.	Same as Alternative 1.	Same as Alternative 1.
Mechanical: guestroom A/C Units	Maintain inefficient guestroom AC units.	Replace with new more efficient AC units.	Replace with new smaller more efficient 4-pipe fan coil units.	Same as Alternative 2.
Mechanical: public areas without cooling	Maintain current public AC system.	Replace existing system. Do not provide additional air conditioning.	Provide additional AC in priority common areas (fan coils). Add radiant heating at ground floor South Wing rooms.	Same as Alternative 1.
Mechanical: Geothermal Technology	Do not supplement heating systems.	(No Work)	Incorporate shallow geothermal tubes for preheating/cooling either below asphalt paths to cottages or below wooden walkway at entry gallery and Porte Cochere (doubles as snowmelt) or use geothermal directional bore holes in ground.	Same as Alternative 1.
Mechanical: Radiant cooling	Maintain current chiller operations.	(No Work)	Operate the cooling tower at night and store cold water. Install pipes under asphalt in parking lot or under cottage paths.	Same as Alternative 1.
Electrical: transformers	Retain inefficient transformers.	Replace with new efficient transformers.	Same as Alternative 1.	Same as Alternative 1.
Electrical: 120/208-volt Service equipment	Retain electrical equipment.	Replace switchgear, distribution panels and related transfer switches.	Same as Alternative 1.	Same as Alternative 1.
Electrical: separate 208V and 480V Services	Retain split electrical service.	(No Work)	Consolidate electrical services into once service at 480V.	Same as Alternative 2.
Electrical: emergency	Retain current generator.	Replace emergency generator in adjusted room layout and location.	Same as Alternative 1.	Same as Alternative 1.

**Table 2-1
Summary Description of the No Action and Action Alternatives (continued)**

Action Evaluated	No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
ENERGY EFFICIENCY AND SUSTAINABILITY (CONTINUED)				
Electrical: power backup system	Retain current transfer switches.	Provide a transfer switch for emergency and legally required standby systems.	Provide transfer switch to other optional standby loads.	Same as Alternative 1.
Electrical: light fixtures	Retain existing light fixtures.	Refurbish historic fixtures in ground floor public areas.	Provide additional dimming/switching and refurbish historic fixtures in ground floor public areas to receive new effective and efficient lamps.	Rehabilitate selected historic lighting fixtures that are seismically safe (seismically unsafe fixtures would be rehabilitated under separate project).
Electrical: lighting control system	Retain current lighting and controls.	Use LED technology for interior lighting to minimize electrical load and support light quality effort; Provide LED site lighting.	Same as Alternative 1, plus: provide central lighting control dimming and switching system for public spaces. Provide central lighting control system for the building exterior (outside).	Same as Alternative 1.
Electrical: off-site photovoltaic	Maintain current service.	(No Work)	Purchase PV electricity produced in Yosemite National Park as part of the project (DNC Warehouse or El Portal NPS Warehouse).	Same as Alternative 1.
Electrical: on-site photovoltaic (PV) system on building	No PV provisions.	(No Work)	Provide a PV system on the roof of the new maintenance building.	Same as Alternative 1.
Electrical: existing appliances and equipment	Retain current concessioner equipment.	Replace existing obsolete equipment with Energy Star/EPA Watersense equipment.	Same as Alternative 1.	Same as Alternative 1.
Electrical: operational plug-load management	Continue current management practices.	Establish a management practice to unplug/turn down guestroom mini-fridges when rooms are unoccupied.	Same as Alternative 1.	Same as Alternative 1.
Plumbing: domestic solar hot water system	No solar hot water heating.	(No Work)	Provide a domestic solar hot water system on the roof of the maintenance shed.	Same as Alternative 1.
Plumbing: public, guestroom, and employee toilets	Retain current fixtures.	Replace flush valves with low-flush model. Replace employee urinals with 0.125 gpm urinals.	Replace toilet with low-flush model; provide waterless urinals at employee toilets.	Same as Alternative 1, except guestroom toilets: replace valves where toilets can accommodate; replace toilets where current fixture is not already low-flow, as needed.
Plumbing: public, guestroom, and employee faucets	Retain current fixtures.	Provide low flow (0.5 gpm) aerators at existing faucets.	Same as Alternative 1.	Same as Alternative 1.
Plumbing: guestroom and employee showerheads	Retain current fixtures.	Replace showerheads with low-flow fixtures (1.5-2 gpm).	Same as Alternative 1.	Same as Alternative 1.

Table 2-1
Summary Description of the No Action and Action Alternatives (continued)

Action Evaluated	No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
ENERGY EFFICIENCY AND SUSTAINABILITY (CONTINUED)				
Plumbing: kitchen fixtures	Retain current fixtures.	Provide water efficient sprayers. Replace existing dishwasher with high water-efficiency dishwasher.	Same as Alternative 1.	Same as Alternative 1.
Plumbing: heat recovery for domestic hot water system	No heat recovery.	(No Work)	Recover heat from dishwasher discharge pipes to supplement domestic hot water.	Same as Alternative 2.
Plumbing: water conservation at heating systems	Retain current plumbing systems.	Close heating condensate loop. Eliminate once-through cooling in refrigerators.	Eliminate once-through cooling in refrigerators.	Same as Alternative 1.
Plumbing: sanitary system	Retain current sanitary sewer plumbing.	Replace existing piping with new PVC piping throughout.	Same as Alternative 1.	Same as Alternative 1.

Actions Considered but Dismissed

The National Park Service considered a range of actions when developing possible alternatives for The Ahwahnee Hotel Comprehensive Rehabilitation Plan. The following actions were analyzed, considered, and dismissed because they did not fully satisfy the objectives of this planning effort. These actions were dismissed for one of the following reasons:

- The action would not satisfy the project's purpose and need.
- Less environmentally damaging options were available.
- The action would cause unacceptable environmental, cultural, or social impacts.
- The action would present unacceptable engineering risks or constraints with an associated increase in costs.
- The action would conflict with the guidance and direction provided in the *General Management Plan*.

Install Micro Piles and Grade Beams or Provide Base Isolation of the Hotel Structure

The proposed actions would involve the installation of a new foundation system that would offer greater protection to the structure in a 2,500 year seismic event. However, these seismic protection benefits would result in prohibitive project costs and undesirable impacts to historic fabric and archeological resources.

Install a Full Mezzanine Structure in the Kitchen

During the alternatives development process, alternatives calling for a full mezzanine or a mezzanine with only a small side-oriented well open to the space below were rejected because they largely obscured the perception of the historic, character-defining two-story Kitchen volume. The National Park Service conferred with structural engineers developing the seismic stabilization actions to ensure that an alternative representing the smallest possible brace-frame and diaphragm (mezzanine) structure needed to stabilize the adjacent Dining Room was considered. As a result, the design alternative represented by Alternative 1 and chosen as the preferred alternative (Alternative 3) preserves an open area of two-story volume between the existing north mezzanine and the new brace-frame mezzanine to be constructed on the south side of the Kitchen.

Maintaining Public Use of the South Mezzanine Meeting Rooms without Adding Additional Means of Egress

The National Park Service considered meeting fire code at the South Mezzanine without adding an additional means of egress by limiting public total occupancy of the meeting rooms. However, the result of rigorous code analysis by the park Fire Marshal/AHJ in conjunction with the Value Analysis process determined that limiting public use does not represent a code-compliant alternative. The results of this analysis indicated that the South Mezzanine does not meet the code definition of a full mezzanine, and egress distances to the foot of the existing interior stair from all points in the meeting rooms do not allow for continued use of the space for public assembly use unless a second, code-compliant means of egress is provided. To assure continued visitor access to and enjoyment of the South Mezzanine spaces and balconies, the Yosemite National Park

Leadership Team approved the preferred alternative to provide code compliant egress by means of a new door through the north wall of the Tresidder Room to the exterior fire escape. The proposed location of the point of egress was carefully considered, and the selected location represents the best overall solution to assure continued public access to these spaces while minimizing further visual effects on the building exterior in the vicinity of the non-historic fire escape.

Address Fire Separation between Dining Room and Hotel by Installing Sprinklers

Through a code review and design process, the National Park Service found that the option to sprinkler the Dining Room in lieu of providing fire separation would not meet fire code requirements, and that the only option to comply with fire code would be to install fire separation doors, as proposed. The overhead fire separation doors proposed would be completely concealed in non-original ceilings at the Diggins Suite and Dining Room.

Install Lightning Protection

The physical location of The Ahwahnee limits the risk associated with lightning. Installation of lightning protection would also result in unnecessary visible impacts on the Very Significant exterior of the National Historic Landmark.

Preserve, Rehabilitate, or Remove Landscape Features

Actions that would affect landscape features including the reflecting pond, parking lot, and tennis court have been deferred, pending the guidance of the upcoming Merced Wild and Scenic River Comprehensive Management Plan on the amounts and types of visitor use that would be appropriate in the wild and scenic river corridor.

Reuse of Existing Hotel Utility Systems

Reuse of existing hotel utility systems was carefully evaluated and elements were proposed for re-use in the action alternatives when feasible. However, some systems are or will soon be beyond their operational/design life. The existing steam boilers and distribution system are very old and inefficient; many air handling units are in need of replacement; fan coil units in guestrooms are too old to find replacement parts; the existing chiller and cooling tower use outdated refrigerants; and the existing HVAC systems in the cottages are temporary. These utility systems could not be re-used and new replacement systems are proposed in the rehabilitation plan.

Alternative Options Considered but Dismissed

In addition to the Actions Considered but Dismissed listed above, the options listed in Table 2-2 were also considered during the planning process for actions that remain in the comprehensive rehabilitation plan.

Table 2-2
Alternative Options Considered but Dismissed for the Comprehensive Rehabilitation Plan

Option Considered	Reason Dismissed
SEISMIC SAFETY RECOMMENDED PRACTICE AND STRUCTURAL STRENGTHENING	
Add shear walls and frames in the Dining Room	The visual impact on this Very Significant area of the hotel would be unacceptable.
Provide a brace frame in the Kitchen	The structure would not function as intended in a seismic event.
FIRE LIFE-SAFETY	
Various emergency egress routes (e.g., interior vs. exterior, width, separation distance between routes)	Impacts on historic fabric and features were considered for each egress option. Fire code requirements drove actions; however those proposals that caused unacceptable impacts on historic fabric or did not meet code requirements were removed from consideration.
Provide localized waterproofing solutions to address water intrusion in the basement and below grade utility rooms (e.g., small repairs and patching to existing waterproofing)	Minimal repairs would not be sufficient to resolve the infiltration of water and code compliance concerns.
Replace of all the cloth wiring throughout the building	Current conditions are acceptable with the California Historic Building Code; replacement of all wire was not a reasonable option due to impacts to historic fabric
ACCESSIBILITY COMPLIANCE	
Reconfiguring the existing Front Desk/Concierge to meet accessibility requirements	The existing area is not large enough to accommodate a redesigned accessible desk.
OPERATIONAL EFFICIENCY	
Maintain existing pneumatic system for control of HVAC and manually controlled lighting	Upgrades to MEP systems in Yosemite Valley are connected to a central system for improved tracking and maintenance.
Reconfigure the Sweet Shop	Reconfiguration was not a reasonable option given impacts to historic fabric/configuration of a Significant space of the hotel.
ENERGY EFFICIENCY AND SUSTAINABILITY	
Install trickle vents to replicate original ventilation in the guestrooms	Current fire code restrictions do not allow the use of these systems, and they would be incompatible with the historic character of the guestrooms.
Replace the large paned glass in the Dining Room and Solarium with double-glazed windows	The impact to historic fabric was too great with the number of proposed window retrofits.
Alternative energy sources (e.g., CNG or propane fuel cell, photovoltaic power, using Royal Arches Creek as an alternative energy source)	Seasonal climate changes, scenic viewshed and wild and scenic river considerations, and the remote location of the park make these choices infeasible.

Comparison of the Alternatives

The three alternatives presented in this document represent a reasonable range of options for rehabilitation of The Ahwahnee. Table 2-3 provides a summary comparison of the potential impacts associated with each of the alternatives, based on the environmental analysis provided in Chapter 3.

Table 2-3
Summary Comparison of Impacts for the No Action and Action Alternatives

No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
GEOHAZARDS			
Under the No Action Alternative, the ongoing threats to life and property from geohazards would continue. While the hotel and cottages generally conform to RP6 seismic standards, some areas of the hotel and cottages (Dining Room, stone chimneys, exterior granite veneers, and two-story gypsum-block walls in the Great Lounge) would not conform to the minimum life-safety standards of the BSE-1 (500-year) earthquake, resulting in a local, long-term, moderate, adverse impact.	Seismic safety improvements proposed under Alternative 1 would meet the minimum RP6 life-safety performance standard for the 500-year (BSE-1) earthquake and 2,500-year (BSE-2) earthquake. This would substantially decrease the threat to life and property at The Ahwahnee from seismic events, resulting in a local, long-term, moderate, beneficial impact.	Seismic safety improvements proposed under Alternative 2 would meet the minimum RP6 life-safety performance standard for the 500-year (BSE-1) earthquake and the 2,500-year (BSE-2) earthquake. In addition, recommended (but not required) measures for seismic stability and structural strengthening would be implemented. These actions would substantially decrease the threat to life and property at The Ahwahnee from seismic events, resulting in a local, long-term, moderate, beneficial impact.	Seismic safety improvements proposed under Alternative 3 would meet the minimum RP6 life-safety performance standard for the 500-year (BSE-1) earthquake and 2500-year (BSE-2) earthquake. These actions would substantially decrease the threat to life and property at The Ahwahnee from seismic events, resulting in a local, long-term, moderate, beneficial impact.
SOILS			
Impacts on soils under the No Action Alternative would occur in areas previously disturbed by the construction of the hotel complex and ongoing operations. Repeated disturbance to soils from maintenance of underground utilities would result in local, short-term, minor, adverse impacts and a local, long-term, minor, adverse impact on soils in the project area. Use of Best Management Practices (Appendix E) to minimize spills, soil compaction, and erosion during construction activities would continue. Continued use of the hardened earth low water crossing for fire department access south of the cottages, and continued use of the inadequately sized fire department access at the hotel, would result in minor to moderate impacts on soils from potential soil erosion and compaction. In addition, there would continue to be local, long-term, minor, adverse, indirect effects on soils from ongoing disruptions of natural groundwater flows and resultant effects on soil characteristics over time.	Impacts on soils under Alternatives 1, 2, and 3 would occur in areas previously disturbed by the construction of the hotel complex and ongoing operations, though some excavations could exceed the vertical extent of previous disturbances. The proposed actions to meet fire and life-safety, seismic, and accessibility codes and standards would impact approximately 0.75 acre of 'resilient' soils and 0.67 acre of 'other' soils. Construction impacts on soils would be mitigated by ongoing implementation of Best Management Practices to minimize spills, soil compaction, and erosion. This would result in a local, short-term and long-term, minor, adverse impact on soils in the project area. In addition, there would continue to be local, long-term, minor, adverse, indirect effects on soils from ongoing disruptions of natural groundwater flows and resultant effects on soil characteristics over time. There would be a local, long-term, minor, beneficial impact on soils from the consolidation of underground utilities and the removal of a hardened earth low water crossing at the unnamed seasonal tributary east of the cottages.		

Table 2-3
Summary Comparison of Impacts for the No Action and Action Alternatives (continued)

No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
HYDROLOGY			
Under the No Action Alternative, there would be no new impacts on local natural hydrologic processes at The Ahwahnee. Seasonally high groundwater would continue to create hazardous conditions in the hotel basement and seasonal runoff would continue to enter the generator room. The presence of the hotel and related facilities, as well as associated landscaping activities, would continue to have a local, long-term, minor to moderate, adverse impact on local hydrologic conditions.	Excavation and construction activities to replace culverts and install a bridge at seasonal tributaries could result in adverse impacts associated with the temporary disruption of the surface flow and the increased potential for soil erosion and sediment transport. In addition, the use of heavy equipment in these areas could result in accidental releases of hazardous substances that would impact water quality. Mitigation measures (Appendix E) would include scheduling construction activity during seasonal periods of low or no water, minimizing disturbance areas, salvaging excavated materials, restoring contours of stream banks, and implementing construction best management practices. These measures would be expected to reduce short-term, adverse impacts on hydrology to a minor to moderate level. Excavation beneath the hotel and the installation of a utility corridor would likely require dewatering activities, which would potentially result in short-term, adverse impacts on the adjacent meadow and Royal Arch Creek. Mitigation measures (Appendix E) would be implemented during construction activities to ensure that dewatering would not increase sediment loading at drainages or otherwise adversely affect the adjacent meadow. Implementation of these measures would reduce excavation impacts to local, short-term, minor, and adverse. In the long-term, there would be a minor to moderate beneficial impact on the unnamed seasonal tributary east of the cottages from removal of a low water vehicle crossing. In addition, installation of site drainage at the hotel basement and back dock would have a local, long-term, moderate, beneficial impact on hydrology by redirecting drainage toward Ahwahnee Meadow.		
VEGETATION			
Under the No Action Alternative, there would be no change in vegetation or vegetation management activities. The No Action Alternative would not further reduce the size or disrupt the continuity and/or integrity of native plant communities in the project area. There would be no new impacts on vegetation resources.	Native vegetation in the project area is already disturbed from previous construction, ornamental landscaping, and pedestrian and vehicular traffic. Under Alternatives 1, 2, and 3, construction activities would result in local, short-term, minor, adverse impacts on the size and continuity of native plant communities. Implementation of Best Management Practices during construction would minimize impacts on surrounding vegetation communities. The removal of select trees to meet fire code requirements along fire access roads and the hardening of select pathways to meet accessibility requirements would result in local, long-term, minor, adverse impacts on the size and continuity of native plant communities.		
WILDLIFE			
Under the No Action Alternative, there would be no new impacts on wildlife habitat or populations.	Habitat in the project area is already disturbed from previous alterations to native vegetation, construction of facilities, and normal hotel operations. With the implementation of mitigation measures for wildlife species (Appendix E), temporary habitat disturbance from construction activities would result in local, short-term, minor, adverse impacts. There would be a local, long-term, minor, adverse impact on upland habitat from removal of select trees and some road widening for fire access road improvements. Implementation of mitigation measures with a focus upon avoidance, limiting construction activities during breeding seasons, and conducting surveys immediately before construction, would minimize impacts on wildlife habitat and populations.		
SPECIAL STATUS SPECIES			
Under the No Action Alternative, there would be no effect on special status wildlife habitat or populations.	The project would occur in suitable habitat for special status bird and bat species. The implementation of mitigation measures in Appendix E with a focus upon avoidance, limiting tree removal, limiting construction activities to outside of breeding seasons, limiting construction activities to daytime hours, conducting detailed surveys immediately before construction, and limiting areas of disturbance, would minimize impacts on these species. Therefore, Alternatives 1, 2, and 3 may affect, but are not likely to adversely affect special status species.		
AIR QUALITY			
Under the No Action Alternative, there would be no new short-term or long-term impacts on air quality. Existing equipment would remain in place and regular maintenance activities would continue.	Implementation of Alternatives 1, 2, or 3 would result in short-term, minor, adverse impacts on local air quality due to construction-related dust, equipment and vehicle emissions. Efficiency upgrades throughout the hotel and cottages for equipment and materials would result in a long-term, minor, beneficial impact on indoor, local, and regional air quality.		

Table 2-3
Summary Comparison of Impacts for the No Action and Action Alternatives (continued)

No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
SOUNDSCAPES			
Under the No Action Alternative, the project area would continue to be impacted by noise generated by regular operations and visitor use at The Ahwahnee. The No Action Alternative would result in no new impacts on soundscapes.	Alternatives 1, 2, and 3 would result in short-term elevated levels of noise in the project area due to construction activities. This would potentially affect guests, onsite staff, and nearby recreational users; however, the number of people impacted would be lower if construction was scheduled during periods of low occupancy, low visitation, or during a hotel closure. In addition, wildlife may be impacted by noise generated during construction. Impacts on wildlife would be mitigated by scheduling construction activities outside of breeding seasons. Overall, Alternatives 1, 2, and 3 would result in a local, short-term, moderate, adverse impact on soundscapes.		
VISITOR EXPERIENCE AND SERVICES			
<p>Visitor experience, services, and safety would generally remain in their current condition. Emergency egress at the hotel would remain noncompliant with fire/life-safety codes and standards. The meeting rooms at the South Mezzanine would remain closed to public use. The potential for injury to building occupants during a seismic event from falling hazards would remain.</p> <p>Accessibility would remain difficult in some areas of the hotel, and some public areas of the hotel would remain inaccessible. The number of ADA-ABA-compliant guestrooms and parking spaces would remain inadequate. Bathroom fixture counts would remain insufficient for the facility. Guestroom air conditioning and ventilation would remain ineffective and uncomfortable during the summer. Historically incompatible aluminum windows would remain in guestrooms. Historic finishes and fabric would continue to deteriorate with no comprehensive plan for their rehabilitation.</p> <p>Overall, the No Action Alternative would result in a local, long-term, moderate, adverse effect on visitor experience resulting from safety hazards, limited accessibility, insufficient ventilation, and deterioration of historic finishes.</p>	<p>Proposed fire/life-safety and seismic stability improvements under Alternative 1 would result in long-term beneficial impacts on visitor safety at The Ahwahnee. The loss of two standard guestrooms would slightly affect room availability. Accessibility improvements, rehabilitation of historic features, increased restroom fixture counts, and improved heating and cooling systems would enhance the visitor experience at the facility.</p> <p>Reconfiguration of the Ahwahnee Bar would improve visitor services through operational upgrades, and the addition of glazing to the bar’s east wall would enhance the sense of arrival at the main entrance to the hotel. Upgrades to building systems would maintain the level of service for day visitors and overnight guests. Overall, improvements proposed with Alternative 1 would result in a local, long-term, minor to moderate, beneficial impact on visitor experience, services, and safety.</p>	<p>Proposed fire/life-safety and seismic improvements under Alternative 2 would result in long-term, beneficial impacts on visitor safety at The Ahwahnee. The loss of one standard guestroom would have a negligible impact on room availability. Re-established public access to the South Mezzanine, accessibility improvements, rehabilitation of historic features, increased fixture counts in the restrooms, and improved and expanded heating and cooling systems would enhance the visitor experience throughout the facility.</p> <p>The remodeled Ahwahnee Bar would improve visitor services through operational upgrades behind the bar. The addition of wood-framed glass to the bar’s north wall would enhance the sense of arrival at the main entrance to the hotel. Overall, improvements proposed under Alternative 2 would result in a local, long-term, moderate, beneficial impact on visitor experience, services, and safety.</p>	<p>Proposed fire life-safety and seismic improvements under Alternative 3 would result in long-term beneficial impacts on visitor safety at The Ahwahnee. The loss of two standard guestrooms would slightly affect room availability. Restored public access to the South Mezzanine, accessibility improvements, rehabilitation of historic features, increased restroom fixture counts, and improved heating and cooling systems would enhance the visitor experience at the facility.</p> <p>The remodeled Ahwahnee Bar would improve visitor service through operational upgrades behind the bar. The addition of wood-framed glass to the bar’s north wall would enhance the sense of arrival at the main entrance to the hotel. Overall, improvements proposed in Alternative 3 would result in a long-term, moderate, beneficial impact on visitor experience, services and safety.</p>

Table 2-3
Summary Comparison of Impacts for the No Action and Action Alternatives (continued)

No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
FACILITY OPERATIONS AND INFRASTRUCTURE			
The No Action Alternative would continue noncompliance with fire/life-safety, accessibility, and health codes. Deterioration of portions of the facility, increasingly greater maintenance needs, and noncompliant employee work areas would persist. Therefore, the No Action Alternative would result in a local, long-term, moderate, adverse impact on operations, maintenance requirements, and facility infrastructure at The Ahwahnee.	Implementation of Alternative 1 would address fire/life-safety code issues throughout the building; upgrade critical mechanical, electrical, and plumbing systems; provide a code-compliant Kitchen and Ahwahnee Bar; provide a limited use/limited access elevator to the South Mezzanine, and provide accessible work and break areas for employees. Overall, implementation of Alternative 1 would result in a long-term, moderate, beneficial impact on operations, maintenance, requirements, and facility infrastructure at The Ahwahnee.	Implementation of Alternative 2 would include the same beneficial impacts on operations and facilities outlined in Alternative 1. In addition, Alternative 2 would provide secondary emergency egress from the South Mezzanine; provide additional upgrades or replacement of mechanical, electrical, and plumbing systems; provide a new point of entry for telecommunications; maximize the use of a Kitchen mezzanine for employee facilities; provide an enlarged maintenance shed with an additional public restroom; and raise the Porte Cochere to accommodate buses. Overall, implementation of Alternative 2 would result in a local, long term, moderate to major, beneficial impact on operations, maintenance requirements, and facility infrastructure at The Ahwahnee.	Implementation of Alternative 3 would include the same beneficial impacts on operations and facilities outlined in Alternative 1. In addition, Alternative 3 would provide secondary egress from the South Mezzanine; additional upgrades or replacement of mechanical, electrical, and plumbing systems; a new point of entry for telecommunication systems; and an enlarged maintenance shed that would improve bellhop storage, provide an additional restroom, and increase maintenance storage capacity. Overall implementation of Alternative 3 would result in a local, long-term, moderate, beneficial impact on operations, maintenance requirements, and facility infrastructure.

Table 2-3
Summary Comparison of Impacts for the No Action and Action Alternatives (continued)

No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
SOCIOECONOMICS			
The No Action Alternative would not impact local or regional employment or wages. There would be no impact on Mariposa County tax revenues.	Under Alternative 1, visitor populations are not likely to be impacted and visitor spending displaced from lodging or other services at The Ahwahnee is likely to be captured at other establishments in the region. Therefore, the impact on visitor spending in both the local and regional economy would be negligible. Concessioner and park revenues would be reduced to some extent during the closure of various facilities and services. The impacts on concessioner and park revenues could be negligible to moderate, depending on construction phasing. Short-term decreases in concessioner employment and/or wages would likely be more than offset by the short-term increases in construction employment and wages, resulting in a short-term, beneficial impact on the local and regional economies. Impacts on Mariposa County could be minor to major and adverse in the short term, depending on the extent of guestroom closures (number of guestrooms and duration) over the 20-year implementation period. Long-term impacts on Mariposa County Transient Occupancy Taxes revenues would be negligible and adverse with the permanent loss of two standard guestrooms (the lost revenue would be offset by the conversion of four standard rooms to two accessible guestroom suites).	Alternative 2 would have the same impact on visitor populations, visitor spending, and concessioner and park revenue, would be the same as Alternative 1. Short-term decreases in concessioner employment and/or wages would likely be more than offset by the short-term increases in construction employment and wages, resulting in a short-term, beneficial impact on the local and regional economies. Impacts on Mariposa County could be minor to moderate and adverse in the short term, depending on the extent of guestroom closures (number of guestrooms and duration) over the 20-year implementation period. Long-term impacts on Mariposa County Transient Occupancy Taxes revenues are anticipated to be negligible with the permanent loss of one standard guestroom (the lost revenue would be offset by the conversion of two standard rooms into one accessible guestroom suite).	Alternative 2 would have the same impact on visitor populations, visitor spending, and concessioner and park revenue, would be the same as Alternative 1. Short-term decreases in concessioner employment and/or wages would likely be more than offset by the short-term increases in construction employment and wages, resulting in a short-term, beneficial impact on the local and regional economies. Impacts on Mariposa County could be minor to major and adverse in the short term, depending on the extent of guestroom closures (number of guestrooms and duration) over the 20-year implementation period. Long-term impacts on Mariposa County Transient Occupancy Taxes revenues would be negligible and adverse with the permanent loss of two standard guestrooms (the lost revenue would be offset by the conversion of four standard rooms to two accessible guestroom suites).
ENERGY CONSUMPTION AND GLOBAL CLIMATE CHANGE			
Under the No Action Alternative, there would be little or no change to energy use and emissions, resulting in a local, long-term, negligible, adverse impact on energy consumption.	Under Alternatives 1, 2, or 3, improved efficiency and reduced energy use would result in a local, long-term, minor to moderate, beneficial impact on overall energy consumption and resulting emissions at The Ahwahnee hotel and a regional, long-term, negligible, beneficial impact on energy consumption and climate change.		

Table 2-3
Summary Comparison of Impacts for the No Action and Action Alternatives (continued)

No Action Alternative	Alternative 1	Alternative 2	Alternative 3 (Preferred)
HISTORIC SITES, BUILDINGS, AND LANDSCAPES			
The No Action Alternative would have the potential to alter, directly or indirectly, characteristics of the historic site that qualified the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Therefore, the No Action Alternative would have an adverse effect on the historic property and on the Yosemite Valley Historic District.	<p>Although the majority of proposed actions would not impact the characteristics that make The Ahwahnee eligible for inclusion on the NRHP, or diminish its integrity, as a whole Alternative 1 would result in an adverse effect to the historic property.</p> <p>The 2011 Programmatic Agreement (Appendix A) would be implemented to resolve the adverse effect. In addition, NPS historical architects and the park historic preservation officer will continue to work with the project design team and SHPO to minimize the adverse effect on the historic property during and construction planning and implementation.</p> <p>Alternative 1 would result in no adverse effect to the Yosemite Valley Historic District.</p>	<p>Although the majority of proposed actions would not impact the characteristics that make The Ahwahnee eligible for inclusion on the NRHP, or diminish its integrity, as a whole Alternative 2 would result in an adverse effect to the historic property.</p> <p>The 2011 Programmatic Agreement (Appendix A) would be implemented to resolve the adverse effect. In addition, NPS historical architects and the park historic preservation officer will continue to work with the project design team and SHPO to minimize the adverse effect on the historic property during and construction planning and implementation.</p> <p>Alternative 2 would result in no adverse effect to the Yosemite Valley Historic District.</p>	<p>Although the majority of proposed actions would not impact the characteristics that make The Ahwahnee eligible for inclusion on the NRHP, or diminish its integrity, as a whole Alternative 3 would result in an adverse effect to the historic property.</p> <p>The 2011 Programmatic Agreement (Appendix A) would be implemented to resolve the adverse effect. In addition, NPS historical architects and the park historic preservation officer will continue to work with the project design team and SHPO to minimize the adverse effect on the historic property during and construction planning and implementation.</p> <p>Alternative 3 would result in no adverse effect to the Yosemite Valley Historic District.</p>
ARCHEOLOGICAL RESOURCES			
The No Action Alternative proposes no ground disturbance, resulting in no adverse effect on individual archeological resources or the Yosemite Valley Archeological District	<p>Under Alternative 1, actions that would cause ground disturbance, including improvements to fire department access, accessibility, operational efficiency, and site drainage, would have the potential to result in an adverse effect on archeological sites CA-MRP-292/293/H and CA-MRP-291/751, as well as the Yosemite Valley Archeological District.</p> <p>Potential adverse effects would be resolved through adherence to NPS cultural resource management guidelines and implementation of the 2011 Programmatic Agreement (Appendix A), which stipulates application of the <i>Archeological Synthesis and Research Design</i> (Hull and Moratto 1999). In addition, an NPS archeologist and the park historic preservation officer would be consulted throughout project design and construction planning and implementation.</p>	<p>Under Alternative 2, actions that would cause ground disturbance, including improvements to egress, fire department access, seismic strengthening, accessibility, operational efficiency, site drainage, and energy efficiency, would have the potential to result in an adverse effect on archeological sites CA-MRP-52/H, CA-MRP-292/293/H, and CA-MRP-291/751, as well as the Yosemite Valley Archeological District.</p> <p>Potential adverse effects would be resolved through adherence to NPS cultural resource management guidelines and implementation of the 2011 Programmatic Agreement (Appendix A), which stipulates application of the <i>Archeological Synthesis and Research Design</i> (Hull and Moratto 1999). In addition, an NPS archeologist and the park historic preservation officer would be consulted throughout project design and construction planning and implementation.</p>	<p>Under Alternative 3, actions that would cause ground disturbance, including improvements to fire department access, seismic strengthening, accessibility, operational efficiency, and site drainage, would have the potential to result in an adverse effect on archeological sites CA-MRP-292/293/H and CA-MRP-291/751, as well as the Yosemite Valley Archeological District.</p> <p>Potential adverse effects would be resolved through adherence to NPS cultural resource management guidelines and implementation of the 2011 Programmatic Agreement (Appendix A), which stipulates application of the <i>Archeological Synthesis and Research Design</i> (Hull and Moratto 1999). In addition, an NPS archeologist and the park historic preservation officer would be consulted throughout project design and construction planning and implementation.</p>
AMERICAN INDIAN TRADITIONAL CULTURAL RESOURCES			
There would be no new impacts on American Indian traditional resources and practices under the No Action Alternative	Traditional cultural resources of value to American Indians might be affected by construction, removal of select native vegetation, and alteration of archeological constituents. The park would continue consultation with culturally associated tribes and groups during project planning and implementation, and would implement the 2011 Programmatic Agreement (Appendix A) in order to protect resources to which American Indian tribes and groups attach cultural values		

Identification of the Preferred Alternative

A Value Analysis and Choosing by Advantage workshop was conducted from September 27 through September 29, 2010. The workshop team included National Park Service subject matter experts and managers, representatives of the park concessioner (Delaware North Companies Parks and Resorts at Yosemite, Inc.), and design and engineering contractors. The workshop was supplemented by several follow-up teleconferences.

Two 50% schematic design alternatives, representing two different approaches to meeting the purpose and need of the plan, were evaluated. Alternative 1 was considered a minimum scheme that relied on code waivers and management options to the maximum extent possible, and adopted the least invasive means of meeting the fundamental objectives of the program. Alternative 2 provided substantive code compliance, exceeded basic seismic safety requirements, and provided a higher degree of historic rehabilitation and operational improvements. One of the primary objectives of the VA was to establish the value added by the increased scope of work represented by Alternative 2.

The Value Analysis focused on applying value analysis principles to identify which alternative components would provide the desired functions for the best value. The evaluation method was Choosing By Advantages, where the relative importance of the advantages of each alternative was weighed, and then the costs and benefits of each considered. The overall goal of the VA was to identify a preferred alternative using value-based decision-making.

As the first task of the evaluation phase, the team developed and discussed the factors that would be used to evaluate the alternatives. NPS Objectives and Factors (Table 2-4) provided the priority setting process based on National Leadership Council guidance, and formed the framework for the evaluation.

Table 2-4
NPS Objectives and Factors Used to Evaluate Project Alternatives

Objective: Protect Cultural and Natural Resources

Factor 1: Prevent loss of resources

Factor 2: Maintain and improve the condition of resources

Objective: Provide for Visitor Enjoyment

Factor 3: Provide visitor services and educational and recreational opportunities

Factor 4: Protect public health, safety and welfare

Objective: Improve Efficiency of Park Operations

Factor 5: Improve operational efficiency and sustainability

Factor 6: Protect employee health, safety, and welfare

Objective: Provide Cost-Effective, Environmentally Responsible, and Otherwise Beneficial Development for the National Park System

Factor 7: Provide other advantages to the national park system

Using the NPS Factors above as a guideline, the team developed the following list of Evaluation Criteria:

- Minimize impact on natural resources
- Preserve historic fabric
- Preserve historic integrity
- Restore historic character
- Provide a comparable experience (qualitative)
- Maintain a traditional level of visitor service (access to services as expected)

- Provide adequate services (including ADA-ABA accessibility)
- Ensure safety and security of visitors
- Ensure a safe working environment
- Ensure food safety and sanitation
- Optimize maintenance and life cycle functionality
- Optimize efficiency of service (and staff)
- Preserve revenue / limit financial impact
- Maximize compliance with NPS Sustainability goals.

Because of the complexity of the overall project, the alternatives were broken down into components for evaluation using Choosing By Advantages methods. These components were selected for detailed analysis because they address two or more of the established purpose and need objectives. Several other single-variant plan components were evaluated using a simple cost/benefit process.

Components were grouped together into packages reflecting interlinked scopes (such as area of building, specific systems impacted, or specific goals addressed). These were:

- Egress from the 5th and 6th floors (no longer addressed in this plan)
- Egress from the 2nd floor
- Kitchen / Dining – Seismic bracing of the Dining hall, construction of the new mezzanine above the Kitchen, and Kitchen renovations. This package also included moving employee locker rooms and break room to the new mezzanine.
- Public restrooms
- Egress from the East Wing, and reconfiguring of the Ahwahnee Bar
- Accessibility / egress from the South Mezzanine
- Raising the Porte Cochere to accommodate taller buses
- Replacement of the maintenance building
- Seismic bracing in the Great Lounge
- Modifications to / addition of air conditioning in public spaces
- Modifications to the Service Bar in the Dining Room
- Seismic bracing of the stone veneer and chimneys
- Renovation of the elevators and shafts
- Protection and rehabilitation of the historic fabric
- Master keying options
- Improvements to the laundry room and chute

Based on the evaluation phase, the team selected the component from each category which scored the highest, established refinements to the alternatives, and an additional alternative was developed.

The Value Analysis-recommended Preferred Alternative is a blend of elements from Alternatives 1 and 2, and in some cases includes new options developed during the workshop. It was presented to and concurred on by the Yosemite National Park Leadership Team on October 20, 2010. Concurrence on the park-approved Preferred Alternative was received in February 2011 from the NPS Pacific West Regional Office and the Preferred Alternative is presented as Alternative 3 of this document.

Environmentally Preferable Alternative

The Council on Environmental Quality (CEQ) regulations implementing NEPA and the National Park Service NEPA guidelines require that “the alternative or alternatives which were considered to be environmentally preferable” be identified (CEQ Regulations, section 1505.2).

Environmentally preferable is defined as “the alternative that will promote the national environmental policy as expressed in NEPA’s section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources” (CEQ 1981).

Section 101 of NEPA states that:

It is the continuing responsibility of the Federal Government to . . . (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations; (2) assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings; (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences; (4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice; (5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life’s amenities; and (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Conformance: Under the No Action Alternative, further historic rehabilitation and stabilization would not occur as it would under the action alternatives. Thus this alternative would not best protect, preserve, or enhance cultural resources, nor would it provide for the safety and code improvements proposed under the action alternatives.

Alternatives 1, 2, and 3 would all meet the above criteria, as they would each provide substantive compliance with current codes and standards, provide historic rehabilitation work that is needed to maintain and protect the historic integrity of The Ahwahnee, and provide increased operational and energy efficiencies. Alternative 1 would best meet criterion (4), as it proposes the minimal scheme to address code compliance issues, relying on code waivers and management options to the maximum extent possible, and adopts the least invasive means of meeting project objectives. Alternative 2 would best meet criterion (6) as it provides the most substantive code compliance with the highest degree of energy and water use efficiencies. However, Alternative 3 would best meet criteria (1), (2), (3), and (5) because it incorporates many of the increased efficiencies and much of the substantive code compliance of Alternative 2 with minimally invasive options of Alternative 1. Alternative 3 provides the maximum feasible protection and preservation of the historic property while meeting plan objectives for public and employee safety, operational and energy efficiency, and visitor experience. Thus, the National Park Service has identified Alternative 3 as the environmentally preferred alternative.

THIS PAGE INTENTIONALLY LEFT BLANK

Chapter 3: Affected Environment and Environmental Consequences

Introduction

This chapter describes the environment that could be affected by the alternatives of The Ahwahnee Comprehensive Rehabilitation Plan and analyzes the potential environmental impacts of the proposed actions in each alternative.

Organization of this Chapter

This chapter includes an introduction that provides a brief overview of the resource topics analyzed and the methods used for analysis. A rationale for excluding certain resource topics is also included. Following the introduction, this chapter is organized by resource topics relevant to the project. Descriptions of the current conditions of each resource topic, based on the most recent studies and analyses available at the time this environmental assessment was prepared, are described in the Affected Environment sections. The Affected Environment sections are followed by an analysis of the Environmental Consequences associated with each proposed alternative, including the No Action Alternative. These analyses provide the basis for comparing the effects of the alternatives.

Resource Topics Considered in this Environmental Assessment

Resource topics considered were selected based on federal law, regulations, executive orders, NPS management policies, NPS subject matter expertise, and concerns expressed by other agencies or members of the public during scoping and comment periods.

Natural Resources

Analysis was performed for the following natural and physical resource topics:

- Geohazards
- Soils
- Hydrology
- Vegetation
- Wildlife
- Special status species
- Air quality
- Soundscapes

Sociocultural Resources

Analysis was performed for the following sociocultural resource topics:

- Visitor experience and recreation
- Park operations and management

- Public health and safety
- Socioeconomics
- Energy consumption and global climate change

Historic Properties

For this project, analysis was performed for the following historic properties resource topics:

- Historic sites, buildings, and landscapes
- Archeological resources
- American Indian traditional cultural resources and practices

Resource Topics Dismissed From Detailed Analysis

Geology: There are no geologic resources that would be affected by any of the proposed actions. The results of geotechnical investigations at the site and the impact of seismic strengthening actions are addressed under the Geohazards section. Therefore, Geology was dismissed from further analysis as a distinct resource topic in this document.

Wetlands: A wetland delineation has not been conducted in the project area. However, evaluation of existing vegetation data in areas where work is proposed indicates that there are no wetland vegetation types in the project area. With the implementation of a Storm Water Pollution Prevention Plan and general construction Best Management Practices (see Appendix E, Mitigation Measures), the proposed action would not have impacts on downstream wetlands. Therefore, this resource topic has been dismissed from further analysis in this document.

Floodplains: Yosemite Valley has a well-developed floodplain, with major roads and structures along or within both sides of the floodplain. The character of the floodplain varies in different locations due to local hydraulic controls. The Merced River watershed has had 11 winter floods since 1916. The January 1997 flood was the largest recorded within the park; it was estimated to have a recurrence interval of 90 years (NPS 1997a).

The NPS Water Resource Division considers the 1997 flood extent to be the predicted 100-year floodplain despite being approximately a 90-year flood, as the 100-year event would not differ substantially in lateral extent from the 90-year event.

The Ahwahnee Hotel Comprehensive Rehabilitation Plan project area was not inundated by the 1997 flood and is not considered to be within the 100-year regulatory floodplain. Therefore, floodplains have been dismissed from further analysis in this document.

Lightscares: Exterior lighting, as well as interior lighting emanating out of windows at The Ahwahnee, does have a local impact on dark night skies in the project area. However, this project does not propose changes to lighting on the interior or exterior of the hotel that would appreciably increase or decrease the amount of light emitted at the hotel. Therefore, lightscares has been dismissed from further analysis in this document.

Scenic Resources: There would be no changes to scenic views from The Ahwahnee, and impacts to historic scenic resources are addressed under the Historic Sites, Buildings and Cultural Landscapes section and the Visitor Experience section. Scenic vista clearing at The Ahwahnee is addressed under the parkwide *Scenic Vista Management Plan*. Therefore, this has been dismissed from further analysis as a separate resource topic in this document.

Public Health and Safety: Public health and safety is a fundamental element of the purpose and need for The Ahwahnee Comprehensive Rehabilitation Plan. As such, it is analyzed under the following topics, rather than as one separate topic: Geohazards (which evaluates the project alternatives in terms of risk to life and property), Visitor Experience (which considers visitor safety), and Facility Operations (which considers employee safety).

Wilderness Experience: The project area does not overlap with designated wilderness, and implementation of The Ahwahnee Comprehensive Rehabilitation Plan would not have any effect on the wilderness experience or wilderness access. Therefore, this resource topic has been dismissed from further analysis in this document.

Transportation: The Ahwahnee Comprehensive Rehabilitation Plan does not propose to change existing vehicular or pedestrian circulation patterns, transportation corridors, or the configuration of The Ahwahnee parking lot. Therefore, this resource topic has been dismissed from further analysis in this document.

Orientation and Interpretation: Implementation of The Ahwahnee Comprehensive Rehabilitation Plan could have negligible to minor impacts on park orientation and interpretation. Proposed actions of this type are addressed under the Visitor Experience and Facility Operations and Management sections. Therefore, this topic has been dismissed from further analysis as a separate resource topic in this document.

Environmental Justice: The Ahwahnee Comprehensive Rehabilitation Plan does not propose to change existing visitor access or levels of visitor service at The Ahwahnee, with the exception of improved accessibility. No aspect of this project would result in disproportionately high and adverse human health or environmental effects on minority or low-income populations; destruction or disruption of community cohesion and economic vitality; displacement of public and private facilities and services; increased traffic congestion; and/or exclusion or separation of minority or low-income populations from the broader community. Therefore, this resource topic has been dismissed from further analysis in this document.

Prime and Unique Agricultural Lands: There are no agricultural lands in the project area and the proposed action would not have any indirect effects to downstream agricultural lands. Therefore, this resource topic has been dismissed from further analysis in this document.

Land Use: Land uses within Yosemite National Park are classified as “parklands,” regardless of the individual types of land uses within the park. Implementation of The Ahwahnee Comprehensive Rehabilitation Plan would not affect land uses within the park. Therefore, this resource topic has been dismissed from further analysis in this document.

Methods for Analyzing Environmental Consequences

The National Environmental Policy Act requires that environmental documents disclose the environmental impacts of a proposed federal action, reasonable alternatives to that action, and any adverse environmental effects that cannot be avoided should the proposed action be implemented. The National Environmental Policy Act and NPS *Director’s Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making* (DO-12) require consideration of the context, duration, intensity, and type of impacts.

Methods for assessing impacts to historic properties are required to meet the standards in the National Historic Preservation Act section 106 implementing regulations (36 CFR 800), described below.

Both direct and indirect impacts of the action must be included in the analysis. Direct impacts are caused by, and occur at the same time and place as, the action, including such impacts as animal and plant mortality and damage to cultural resources. Indirect impacts are caused by the action, but occur later in time at another place or to another resource, including changes in species composition, vegetation structure, range of wildlife, offsite erosion, or changes in general economic conditions tied to park activities.

Impact Analysis for Natural and Sociocultural Resources

The environmental consequences for each natural and sociocultural impact topic were defined based on the following information regarding context, type of impact, duration of impact, intensity of impact and the cumulative context. Unless otherwise stated, impact analysis is based on a qualitative assessment of impacts. Context, duration, type and intensity of impact are characterized in more detail specific to each resource topic, when applicable, preceding the environmental consequences discussion in each resource section below.

Context of Impact

The context is the setting or area within which impacts are analyzed – such as the local project area, the region, or national area of influence.

- **Local:** Detectable only in the vicinity of the proposed action.
- **Regional:** Detectable on a landscape scale (beyond the affected site).
- **National:** Detectable on a national scale.

Duration of Impact

Duration is a measure of the time period over which the effects of an impact persist. The duration of impacts evaluated in this environmental assessment may be one of the following:

- **Short-term:** Generally, short-term impacts are temporary, transitional, and associated with construction and removal activities.
- **Long-term:** Long-term impacts are typically those effects that continue to occur after construction and last 10 years or more, and could be considered permanent.

Intensity of Impact

The intensity of an impact considers whether the impact is judged negligible, minor, moderate, or major relative to existing conditions. Intensities of impact for historic properties are measured differently, and are described under a separate discussion, below.

- **Negligible:** The measurable or anticipated degree of change would not be detectable or would be only slightly detectable, localized, or at the lowest level of detection.
- **Minor:** The measurable or anticipated degree of change would have a slight effect, causing a slightly noticeable change of approximately less than 20 percent compared to existing conditions, often localized.
- **Moderate:** The measurable or anticipated degree of change is readily apparent and appreciable and would be noticed by most people, with a change likely to be between 21 and 50 percent compared to existing conditions; can be localized or widespread.
- **Major:** The measurable or anticipated degree of change would be substantial, causing a highly noticeable change of approximately greater than 50 percent compared to existing conditions; often widespread.

Type of Impact

A measure of whether the impact would improve or harm the resource and whether that harm occurs immediately or at some later point in time.

- **Beneficial:** Reduces or improves impact being discussed.
- **Adverse:** Increases or results in negative impact being discussed.

Impact Analysis for Historic Properties

“Historic properties,” as defined by the implementing regulations of the National Historic Preservation Act, are any districts, buildings, structures, sites, or objects, including resources that are considered by American Indians to have cultural and religious significance, that are eligible for inclusion in the National Register of Historic Places (NRHP) because they are significant at the national, state, or local level in American history, architecture, archeology, engineering, or culture. The term “eligible for inclusion” includes both properties formally determined eligible and all other properties that meet NRHP listing criteria.

NPS management policies and cultural resource management guidelines call for the consideration of historic properties in planning proposals. To meet NPS obligations under the National Historic Preservation Act and the National Environmental Policy Act, among other regulations, methods for identifying historic properties and assessing impacts must meet the standards in NHPA section 106 implementing regulations (36 CFR 800).

NHPA Determinations of Effect

Conventional terms used by the National Park Service to measure the context, duration, intensity, and type of impact as part of NEPA analysis are not valid for assessing effects on historic properties under NHPA standards. Because the effect on a historic property is measured by the status of the historic property’s eligibility for listing in the National Register of Historic Places, the negligible, minor, moderate and major degrees do not apply: either a historic property maintains the characteristics making it eligible for listing in the National Register of Historic Places, or it does not.

The Advisory Council on Historic Preservation (ACHP) has issued regulations for the implementation of section 106, entitled *Protection of Historic Properties* (36 CFR 800). ACHP regulations discuss the following types of effect:

- **No Historic Properties Affected:** When there are no historic properties present, or the action will have no effect on historic properties, the action is said to have *no effect* on historic properties.
- **No Adverse Effect:** Occurs when there will be an effect on a historic property, but the action will not alter characteristics that make the property eligible for inclusion in the National Register of Historic Places in a way that would diminish the integrity of the property.
- **Adverse Effect:** Occurs when an action will alter, directly or indirectly, any of the characteristics of a historic property that qualify it for inclusion in the National Register of Historic Places, in a way that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association. Adverse effects may include reasonably foreseeable effects caused by the action that may occur later in time, be farther removed in distance, or be cumulative.

Resolving Adverse Effects on Historic Properties

An adverse effect under section 106 of NHPA can be resolved with a good faith effort to consider whether and how to avoid, reduce, or mitigate the effect, which could be done by modifying the undertaking, imposing certain mitigation conditions, such as photographic documentation; treatment of historic buildings, structures, and landscapes in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties (Standards)*; or other measures negotiated in consultation with the California State Historic Preservation Officer, culturally associated American Indian tribes and groups, and the public. These measures would be documented in a memorandum of agreement, a programmatic agreement, or a NEPA decision document.

Because the National Park Service anticipated that a comprehensive rehabilitation program would have an adverse effect (as defined by ACHP regulations) on The Ahwahnee National Historic Landmark and would have the potential to affect archeological sites that contribute to the Yosemite Valley Archeological District, the National Park Service at Yosemite National Park and the California State Historic Preservation Officer have entered into a programmatic agreement, pursuant to 36 CFR 800.14(b) (see Appendix A). The seven culturally associated American Indian tribes and groups have been invited to participate in the programmatic agreement as concurring parties. The 2011 Ahwahnee Comprehensive Rehabilitation Program Programmatic Agreement (2011 Programmatic Agreement)(Appendix A) includes documentation, interpretation, and National Register reevaluation as mitigation measures that will be implemented in the event of an adverse effect on historic properties.

Methodology

In accordance with ACHP regulations implementing NHPA section 106, effects on historic properties were identified and evaluated by:

- Determining the area of potential effect
- Identifying cultural resources present in the area of potential effect that were either listed in or eligible for listing in the National Register of Historic Places
- Applying the criteria of adverse effect to affected cultural resources listed in or eligible for listing in the National Register of Historic Places
- Considering ways to avoid, minimize, or mitigate adverse effects

Area of Potential Effect for this Project

As defined under NHPA section 106, the area of potential effect for this project is The Ahwahnee hotel, its ancillary structures, and the area immediately surrounding these buildings (see Appendix A, Attachment A).

Properties Analyzed for this Project

Historic properties that could potentially be affected by this project include The Ahwahnee National Historic Landmark, the Yosemite Valley Historic District, archeological resources, American Indian traditional cultural resources, and the Yosemite Valley Archeological District.

Cumulative Impacts

Cumulative impacts are the effects on the environment that would result from the incremental impacts of the action when added to other past, present and reasonably foreseeable future actions. Impacts would be considered cumulative regardless of what agency or group (federal or nonfederal) undertakes the action. The CEQ describes a cumulative impact as follows (Regulation 1508.7):

...a "Cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The cumulative impacts addressed in this analysis include past actions, present actions, as well as any planning or development activity currently being implemented or planned for implementation in the reasonably foreseeable future. Cumulative actions are evaluated in conjunction with the impacts of an alternative to determine if they would have additive effects on a particular resource. Because some of the cumulative projects are in the early planning stages, the evaluation of cumulative impacts was based on a general description of those projects.

Appendix D contains a list of projects included in the cumulative impacts analysis. Cumulative impacts are addressed for each alternative in the Environmental Consequences section of each resource topic.

Impairment

In addition to determining the environmental consequences of the alternatives, NPS *Management Policies 2006* (NPS 2006a) and Director's Order 12 require analysis of impacts to determine if actions would impair park resources and values. The evaluation of impairment is included with this environmental assessment as Appendix G.

Impact Mitigation Measures

The National Park Service places a strong emphasis on avoidance, minimization, and mitigation of impacts, to help ensure that the activities associated with The Ahwahnee Comprehensive Rehabilitation Plan would protect park resources and the quality of the visitor experience.

Mitigation measures include the following types of actions:

- *Avoid* conducting management activities that would adversely affect the resource.
- *Minimize* the type, duration, or intensity of the impact on an affected resource.
- *Repair* localized damage to the affected resource immediately after an adverse impact.
- *Rehabilitate* an affected resource with a combination of additional management activities.
- *Compensate* a major long-term adverse direct impact through additional strategies designed to improve an affected resource to the degree practicable.

Specific mitigation measures that would occur prior to, during, and after construction under all action alternatives are described in Appendix E: Mitigation Measures Common to All Action Alternatives.

Natural Resources

Geologic Hazards

Affected Environment

Overview

Yosemite National Park is a geologically active area where natural forces continue to shape the landscape. Geologic hazards, such as earthquakes and rockfall, present potentially harmful conditions for people and facilities in the park. Actions proposed under the action alternatives would not affect the incidence or effects of rockfall events at The Ahwahnee. Therefore, geologic hazards within the affected environment for this project would be limited to seismic events.

Earthquakes felt in Yosemite Valley usually have epicenters in western California or along the eastern flank of the Sierra Nevada. Historically, nine earthquakes (not including aftershocks) have been felt and reported in Yosemite Valley. (Wieczorek and Jaeger 1996). No active or potentially active earthquake faults have been identified in the mountain region of Yosemite National Park (Hart 1990).

The primary source of seismic shaking in the project area is anticipated to be the Owens Valley Fault Zone, located along the eastern front of the Sierra Nevada. The portions of the fault system closest to the project area include the Hilton Creek, Hartley Springs, and Round Valley faults in the Mammoth Mountain – Lake Crowley region (Kleinfelder 2009). Active or potentially active faults that may generate earthquakes affecting Yosemite Valley, and their distances from the project area, are summarized in Table 3-1.

Table 3-1
Active Regional Faults

Fault	Approximate Distance from Project Area (miles)	Direction from Project Area
Melones	21.0	Southwest
Hartley Springs	28.0	East
Mono Lake	28.5	East
Robinson Creek	35.0	Northeast
Hilton Creek	38.0	East
Round Valley	47.0	East

Source: Moore Twining and Associates 2010, Treadwell & Rollo 2009

Applicable Seismic Standards

Current seismic evaluation and rehabilitation requirements are governed by the Interagency Committee on Seismic Safety in Construction (ICSSC) Recommended Practice 6 (RP6) *Standards of Seismic Safety for Existing Federally Owned and Leased Buildings* (see Chapter 1, Applicable Codes and Standards). RP6 requires that existing buildings meet the Life Safety performance objective and the Basic Safety Objective. The Basic Safety Objective considers the building's seismic performance in two different earthquake events.

The first event considered is the “expected” event that may likely occur once during the useful life of the building. It is referred to as the Base Safety Earthquake (BSE)-1 and has a 500-year return period, or an event with a 10% chance of being exceeded in 50 years. ICSSC standards require

buildings to meet the life-safety performance levels of a BSE-1 earthquake; meaning that people in and around the building are expected to be safe from serious injury and death.

The other is the “extreme” event that is considered to be the largest possible earthquake that could affect the site. It is referred to as the BSE-2 earthquake and it has a 2,500-year return period, or a 2% chance of being exceeded in 50 years. A building is required to meet the collapse-prevention performance level when the BSE-2 earthquake occurs. Although damage to the structures and historic fabric could occur, The Ahwahnee hotel and cottages meet the BSE-2 collapse-prevention standards. However, due to the continuous development of seismic design standards since the construction of The Ahwahnee hotel and cottages, there are some inherent qualities of the structures that may not meet the Basic Safety Objective. Locations that may create safety hazards during BSE-1 and BSE-2 earthquakes include (Degenkolb Engineers 2010):

Hotel Dining Room

Due to the lack of a lateral force resisting system in the wood-framed hotel Dining Room, considerable damage could occur in this portion of the hotel when subjected to a BSE-1 or BSE-2 earthquake, resulting in hazards to occupant safety and potentially substantial damage to the structure. Specifically,

- The roof of the Dining Room could separate from the adjoining kitchen and hotel building with a gap of approximately 1 to 3 inches;
- Stone columns at the west end of the Dining Room could rock independently of one another and the roof, potentially dislodging stones from the top of columns;
- Glazing in the window walls at the south side of the Dining Room may shatter.

Hotel and Cottage Stone Chimneys

The stone chimneys on the hotel are discontinuous below the roof structure, and the stone chimneys on the cottages are not adequately braced at the roof level. When subjected to a BSE-1 or BSE-2 earthquake, chimneys could topple and injure visitors or employees below.

Hotel South Wing Interior Walls

Two-story gypsum block walls flanking the Solarium and Great Lounge fireplaces may fail during a BSE-1 or a BSE-2 earthquake due to building drift or accelerations, resulting in falling hazards to building occupants or blocked egress.

In addition, the lack of shear walls in the Great Lounge and Solarium may result in damage to floors and finishes at the intersection of the south wing, east wing, and Gift Shop, including cracking or breakage of the very significant stained glass windows, the historic storefront, and decorative stenciling. However, work in this area is not required to meet current seismic life-safety or collapse-prevention performance standards.

Hotel Exterior Walls

The existing granite stone veneers may separate from their concrete backing during either a BSE-1 or a BSE-2 earthquake, resulting in a safety hazard to occupants from stone falling into egress paths.

Hotel Porte Cochere

The wood-framed entry walkway and the Porte Cochere are susceptible to damage during either a BSE-1 or a BSE-2 earthquake. However, work is not required to meet current RP6 seismic performance standards.

Hotel Mechanical, Electrical, and Plumbing (MEP) Equipment

Unanchored or unbraced equipment may fail in either a BSE-1 or a BSE-2 earthquake, resulting in severely disrupted hotel operations. However, upgrades to existing equipment are not required to meet current RP6 seismic performance standards.

Environmental Consequences - Methodology

The National Park Service defines a geohazard as any geological or hydrological process that poses a threat of injury or death to people and/or damage to their property. This analysis focuses on the potential hazards to life and property in the project area due to geological events, specifically earthquakes. The potential threats to life and property as a result of earthquakes are considered in this analysis.

Several assumptions were integrated into this assessment, as summarized below:

- It is not possible to completely avoid all hazards due to natural processes such as earthquakes. Considering this, any type of use in the project area exposes visitors and employees to life-safety geohazards;
- Large-impact, low-frequency geologic hazards that affect public safety are rarely predictable, and the extent to which they may affect people and/or property cannot be quantified. Analysis of such effects is therefore qualitative, and professional judgment is applied to reach reasonable conclusions as to the context, duration, and intensity of potential impacts;
- Threats to life and property from geohazards are most effectively mitigated by avoiding development in geohazard areas.

Context: Potential for impacts related to geohazards would be local.

Duration: Potential for impacts related to geohazards would be long-term and permanent.

Intensity: The intensity of the impact would be negligible if the probability (risk) of impact from a geohazard on life and property is minimal. The intensity of the impact would be minor if there is a detectable risk of impact on life and property. The intensity of the impact would be moderate if there is a substantial risk of impact on life and property. The intensity of the impact would be major if there is a substantial increase or decrease in threats to life and property.

There will always be a potential for adverse impacts on life and property due to geologic hazards, especially in developed areas within seismically active zones. Therefore, management actions to avoid or restrict use or placement of facilities in areas susceptible to geologic hazards may decrease the risks, but would not necessarily reduce the intensity of the impact.

Type: All earthquake events are potentially hazardous. The type of impact is related to risk (i.e., probability of impact), and it is difficult to estimate risk of impacts involving natural events. In general, reducing risk to life and property from geohazards is considered a beneficial impact. Maintaining facilities as-is or moving facilities into a zone of higher threat or exposing people to greater potential for geohazards would be considered adverse.

Environmental Consequences of the No Action Alternative

Analysis

The threats to life and property as a result of earthquakes would remain as described under ‘Affected Environment’ above. Generally, the hotel and cottages conform to seismic standards for collapse prevention under a 2,500-year seismic event (BSE-2). Areas of the hotel that would not conform to the minimum RP6 life-safety performance standard of the BSE-1 (500-year) earthquake include: the Dining Room, large (greater than 16 square feet) plate glass windows in the Dining Room and Solarium, hotel and cottage chimneys, the two-story gypsum-block walls at the Great Room and Solarium, and egress areas beneath exterior stone veneers at the hotel. In addition, damage to the Porte Cochere and at the intersections of the south wing, east wing, and Gift Shop of the hotel could occur as a result of BSE-1 or BSE-2 earthquakes, but work is not required in these areas to meet seismic performance standards.

Conclusion: Under the No Action Alternative, the ongoing threats to life and property from geohazards would continue. While the hotel and cottages generally conform to RP6 seismic standards, some areas of the hotel and cottages (Dining Room, stone chimneys, exterior granite veneers, and two-story gypsum-block walls in the Great Lounge) would not conform to the minimum life-safety standards of the BSE-1 (500-year) earthquake, resulting in a local, long-term, moderate, adverse impact.

Cumulative Impacts

Past projects that contributed to adverse geohazard impacts on life and property within the project area included the original construction and expansion of The Ahwahnee into areas where damage from earthquakes could occur, although the structure conformed to seismic standards at the time it was built. The hotel and cottages meet the current RP6 BSE-2 collapse-prevention standard.

Current or reasonably foreseeable projects that could contribute to beneficial impacts (i.e., threat reduction) related to geohazards include the planned seismic strengthening of The Ahwahnee dormitory, which does not meet the current BSE-1 safety performance standard. However, because the minimum life-safety requirements of current seismic standards would not be met under the No Action Alternative, there would continue to be an overall local, long-term, moderate, adverse impact on geohazard threats to life and property at The Ahwahnee.

Environmental Consequences of Alternative 1

Analysis

The following seismic safety improvements proposed under Alternative 1 would address the minimum life-safety performance standards of the 500-year (BSE-1) earthquake and the 2,500-year (BSE-2) earthquake:

Dining Room

- Bracing the Dining Room in the north-south and in the east-west direction would prevent the Dining Room from separating from the kitchen wing and the main hotel building core in a seismic event, resulting in a decreased potential for injury to occupants from associated falling hazards, and of significant damage to the structure;

- Capping and pinning of granite veneers at the western Dining Room columns would interconnect and reinforce these features, resulting in a decreased risk of injury to occupants from falling stones;
- Reinforcement of glazing on windows over 16 square feet in the Dining Room and Solarium would prevent the windows from shattering during a seismic event, reducing the likelihood of injury to occupants.

Stone Chimneys

- Reinforcement of the stone chimneys on the hotel roof with exterior collar straps and guy wires, and reinforcing the stone chimneys at the cottages, would reduce the likelihood of falling stones and injury to occupants on the ground.

South Wing Interior Walls

- Reinforcement of the non-structural, two-story gypsum-block walls at the Great Lounge with an internal steel frame would reduce the likelihood of collapse and injury to occupants.

Exterior Walls

- Exterior granite veneer located above egress points would be pinned, resulting in a reduced likelihood of falling stones and injury to occupants exiting the building.

Conclusion: Seismic safety improvements proposed under Alternative 1 would meet the minimum RP6 life-safety performance standard for the 500-year (BSE-1) earthquake and 2,500-year (BSE-2) earthquake. This would substantially decrease the threat to life and property at The Ahwahnee from seismic events, resulting in a local, long-term, moderate, beneficial impact.

Cumulative Impacts

Past projects that contributed to adverse geohazard impacts on life and property within the project area included the original construction and expansion of The Ahwahnee into areas where damage from earthquakes could occur, although the structure conformed to seismic standards at the time it was built. The hotel and cottages meet the current RP6 BSE-2 collapse-prevention standard.

Current or reasonably foreseeable projects that could contribute to beneficial impacts (i.e., threat reduction) related to geohazards include the planned seismic strengthening of The Ahwahnee dormitory, which does not meet the current BSE-1 safety performance standard. Cumulative actions in combination with Alternative 1 would result in a net local, long-term, moderate, beneficial impact on geohazard threats to life and property at The Ahwahnee.

Environmental Consequences of Alternative 2

Analysis

Seismic safety improvements proposed under Alternative 2 would address the minimum required life-safety performance standard for the 500-year (BSE-1) earthquake and the 2,500-year (BSE-2) earthquake. Alternative 2 has many of the same actions called for in Alternative 1, with some additional structural strengthening actions. The required and recommended measures would result in the following:

Dining Room

- Bracing the Dining Room in the north-south and in the east-west direction would prevent the Dining Room from separating from the kitchen wing and the main hotel building core in a seismic event, resulting in a decreased potential for injury to occupants from associated falling hazards, and of significant damage to the structure;
- Capping and pinning of granite veneers at the western Dining Room columns would interconnect and reinforce these features, resulting in a decreased risk of injury to occupants from falling stones;
- Reinforcement of glazing on windows over 16 square feet in the Dining Room and Solarium would prevent the windows from shattering during a seismic event, reducing the likelihood of injury to occupants.

Stone Chimneys

- Reinforcement of the stone chimneys on the hotel roof with internal core steel bracing and a concrete ring in the attic, and reinforcing stone chimneys at the cottages, would reduce the likelihood of falling stones and injury to occupants on the ground.

South Wing Interior Walls

- Reinforcement of the non-structural two-story gypsum block walls at the Great Lounge with an internal steel frame would reduce the likelihood of collapse and injury to occupants; providing of four shear walls at the Solarium and at the Elevator Lobby would add strength and stability to these parts of the building.

Exterior Walls

- Reinforcement of the exterior granite veneer with stainless steel pins throughout the exterior of the hotel on all floors would reduce the likelihood of falling objects and injury to occupants exiting the building.

Porte Cochere

- The entry canopy and Porte Cochere would be tied together by either using connections to a new maintenance shed or a slip joint created to reduce the damage to these structures.

Mechanical, Electrical, and Plumbing Equipment

- Bracing major MEP equipment would reduce the likelihood of injury to occupants from moving equipment;
- Providing joints at the utility lines would reduce the likelihood of utility lines breaking, spilling contents, and causing additional damage or injury to occupants and the building.

Conclusion: Seismic safety improvements proposed under Alternative 2 would meet the minimum RP6 life-safety performance standard for the 500-year (BSE-1) earthquake and the 2,500-year (BSE-2) earthquake. In addition, recommended (but not required) measures for seismic stability and structural strengthening would be implemented. These actions would substantially decrease the threat to life and property at The Ahwahnee from seismic events, resulting in a local, long-term, moderate, beneficial impact.

Cumulative Impacts

Past projects that contributed to adverse geohazard impacts on life and property within the project area included the original construction and expansion of The Ahwahnee in areas where damage from earthquakes could occur; although the structure did conform to seismic standards

at the time it was built. The hotel and cottages meet the current RP6 BSE-2 collapse-prevention standard. Current or reasonably foreseeable projects that could contribute to beneficial impacts (i.e., threat reduction) related to geohazards include the planned seismic strengthening of The Ahwahnee dormitory, which does not meet the current BSE-1 safety performance standard. Cumulative actions in combination with Alternative 2 would result in a net local, long-term, moderate, beneficial impact by reducing threats to life-safety and property at The Ahwahnee.

Environmental Consequences of Alternative 3

Analysis

Seismic safety improvements proposed under Alternative 3 would meet the RP6 life-safety performance standards for the 500-year (BSE-1) earthquake and the 2,500-year (BSE-2) earthquake. Alternative 3 proposes many of the same measures as Alternatives 1 and 2, with some modifications that would meet required compliance and recommended goals with consideration of cost and feasibility. The required and recommended measures would result in the following:

Dining Room

- Bracing the Dining Room in the north-south and in the east-west direction would prevent the Dining Room from separating from the kitchen wing and the main hotel building core in a seismic event, resulting in a decreased potential for injury to occupants from associated falling hazards, and of significant damage to the structure;
- Capping and pinning of granite veneers at the western Dining Room columns would interconnect and reinforce these features, resulting in a decreased risk of injury to occupants from falling stones;
- Reinforcement of glazing on windows over 16 square feet in the Dining Room and Solarium would prevent the windows from shattering during a seismic event, reducing the likelihood of injury to occupants.

Stone Chimneys

- Reinforcement of the stone chimneys on the hotel roof with internal core steel bracing and a concrete ring, and reinforcing the stone chimneys at the cottages, in the attic would reduce the likelihood of falling stones and injury to occupants on the ground.

South Wing Interior Walls

- Reinforcement of the non-structural two-story gypsum block walls at the Great Lounge with an internal steel frame would reduce the likelihood of collapse and injury to occupants.

Exterior Walls

- Exterior granite veneer located above egress points would be pinned, resulting in a reduced likelihood of falling stones and injury to occupants exiting the building.

Porte Cochere

- The entry canopy and Porte Cochere would be tied together by using connections to a new maintenance shed to reduce the damage to these structures.

Mechanical, Electrical, and Plumbing Equipment

- Bracing major MEP equipment would reduce the likelihood of injury to occupants from moving equipment;
- Providing flexible joints at the utility lines would reduce the likelihood of utility lines breaking, leaking, and causing additional damage or injury to occupants and the building.

Conclusion: Seismic safety improvements proposed under Alternative 3 would meet the minimum RP6 life-safety performance standard for the 500-year (BSE-1) earthquake and 2500-year (BSE-2) earthquake. These actions would substantially decrease the threat to life and property at The Ahwahnee from seismic events, resulting in a local, long-term, moderate, beneficial impact.

Cumulative Impacts

Past projects that contributed to adverse geohazard impacts on life and property within the project area included the original construction and expansion of The Ahwahnee in areas where damage from earthquakes could occur; although the structure did conform to seismic standards at the time it was built. The hotel and cottages meet the current RP6 BSE-2 collapse-prevention standard.

Current or reasonably foreseeable projects that could contribute to beneficial impacts (i.e., threat reduction) related to geohazards include the planned seismic strengthening of The Ahwahnee dormitory, which does not meet the current BSE-1 safety performance standard. Cumulative actions in combination with Alternative 3 would result in a net local, long-term, moderate, beneficial impact on geohazard threats to life and property at The Ahwahnee.

Soils

Soil composition in Yosemite Valley varies from fine silt and sand to fine gravel. Most soils have a relatively undeveloped profile, indicating their relatively recent deposition and young geologic age.

The National Park Service groups soil types into three general categories: *sensitive* soils, *resilient* soils, and *other* soils. *Sensitive* soils support, or have the potential to support, highly valued vegetation communities such as meadows and wetlands. Sensitive soils have an aggregate structure and chemistry that are easily affected by disturbance. *Resilient* soils are those capable of withstanding alteration and heavier use without permanent deformation, or that recover more easily from alteration and disturbance. Resilient soils are typically well-drained, upland sandy soils. *Other* soils are not considered highly valued or resilient and are generally more abundant. These soils are not likely to support plant communities that are rare or notably diverse.

As defined in a 1991 study of soils in Yosemite Valley (SCS 1991), soils in the project area consist of *resilient* soils (Miwok complex) and *other* soils (Mollic xerofluvents).

In 2009, a total of 11 soil boring and two hand-auger samples were taken within or near the project area. Samples from a series of seven soil borings at varying depths were taken in May 2009, as part of an ongoing utilities upgrade in Yosemite Valley. These borings ranged in depth between 21.5 and 36.5 feet, with soils types generally consisting of silty sands, medium dense to dense poorly graded sands, and decomposed granite with small cobbles (Kleinfelder 2009). In August 2009, samples from one soil boring reaching a depth of 31.5 feet and two hand augers reaching a depth of 4.5 feet each were taken as part of a foundation investigation for The Ahwahnee

dormitory. Soils consisted of primarily silty sands, medium to fine sands, and gravels. Some organic matter was observed in the near-surface soils in the hand-auger samples (Moore Twining Associates, Inc. 2009).

The results from three soil borings taken in August 2009, in the immediate vicinity of The Ahwahnee hotel, indicate that subsurface soils consist primarily of alluvial deposits of sand, silty sand, and sand with gravel deposits ranging in consistency from loose to very dense. In general, the sand layers were loose to medium dense in the upper 10 to 15 feet and became denser with depth. However in one boring, loose sand deposits were encountered at depths of approximately 33 and 40 feet and between 44 and 58 feet, and in another boring at depths between approximately 33 and 48 feet. The gravel layers encountered ranged in thickness from 4.5 to 11 feet and were dense to very dense (Treadwell & Rollo 2009).

Environmental Consequences Methodology

Soils analysis was based on a qualitative assessment of generalized soil types and typical effects of the type of impact described.

Types of soil impacts evaluated include soil removal, soil profile mixing, soil compaction, soil erosion, and soil contamination. Proposed activities that may result in soil impacts include the construction of site drainage, utility corridors, foundation footings, and alterations to existing road and trail corridors.

- **Soil Removal.** Grading the soil surface can result in changes to basic soil properties, such as overall texture, chemistry, and permeability. Excavation and removal of surficial soil in previously undisturbed areas would result in a long-term impact because the basic soil properties of the area, which have taken thousands of years to develop, would be altered. Paving or impermeable hardening the surface reduces water movement and alters the normal physical and chemical soil processes.
- **Soil Profile Mixing.** Soil excavation, backfilling, and redistribution in previously undisturbed areas result in removal or mixing of the native soil profile and disrupt soil structural characteristics, interrupting or altering the chemical, physical, and biological processes that naturally occur in the soil. The degree of impact is dependent upon the depth and extent of the disruption. It may take many years to redevelop the soil profile.
- **Soil Compaction.** Soil compaction may occur as a result of construction activities in areas of intensive use such as trails, campgrounds, and picnic areas. Soil compaction reduces infiltration rates, thereby increasing surface runoff and the potential for erosion. Deep compaction of soils may impede water table recharge or shallow groundwater flow. In turn, these effects could alter processes such as nutrient transfer, biological processes such as root development and microbial patterns, and physical processes such as soil structure. Vegetation growth on compacted soils is often limited due to low infiltration and poor root penetration.
- **Soil Erosion.** Removal of vegetation through grading activities or pedestrian use and soil compaction may result in accelerated erosion of surface soils. Soils on steep slopes and along watercourses are especially susceptible to erosion.
- **Soil Contamination.** The release of chemical constituents into the soils as a result of pavement installation, untreated runoff from paved surfaces, or from incidental spills, may contaminate downgradient water bodies or groundwater, and may alter micro- or macro-organism populations, diversity, and dynamics. Machinery involved with construction activities may release small amounts of natural and synthetic petrohydrocarbons into soils through equipment failure or normal operations.

Context: With Best Management Practices in place, the impact would be detectable only within the vicinity of the proposed action. Thus, the setting or area within which impacts are analyzed would be local.

Duration: Duration of soils impacts would be characterized as short-term or long-term. Short-term impacts could be restored when project construction is completed and would last 20 years or less. Long-term impacts would last over 20 years.

Intensity: The evaluation of the intensity of impacts on soils focuses on resilient and other soils, as these are the soil types found in the project area. Impact intensity was characterized as negligible, minor, moderate, or major. Negligible impacts would be small in scale in previously disturbed soils or not detectable. Minor impacts would be small scale (1 to 5 acres) and would include mostly short-term impacts. Moderate impacts would be greater in extent (>5-10 acres), measureable, and potentially long-term. Major impacts would have of substantial extent (> 10 acres) and with primarily long-term effects.

Type: Impacts are considered adverse if implementation of an alternative would result in removal of native soils, soil profile mixing, and/or soil compaction, erosion, or contamination. Impacts are considered beneficial if implementation of an alternative would restore native soils, reduce soil erosion, decompact soils, or reduce existing soil contamination.

Environmental Consequences of the No Action Alternative

Analysis

Under the No Action Alternative, there would be no ground disturbing activities at the hotel. Ongoing routine maintenance and repair of existing and, in some cases, aging underground utilities would continue in the project area, resulting in soil removal and soil profile mixing during excavation activities. Construction impacts would be minimized by limiting the area of disturbance, salvaging existing soils for use as backfill, and implementing the park's Best Management Practices (see Appendix E) that would reduce the potential for soil erosion and transport, and minimize contamination from construction equipment.

Continued use of the existing low water crossing on the unnamed seasonal tributary near the cottages could result in soil erosion and soil compaction, particularly during wet periods. Continued use of the existing hardened fire access around the hotel could result in soil compaction where emergency vehicles may travel outside of the existing access corridor to navigate the exterior of the hotel.

Conclusion: Impacts on soils under the No Action Alternative would occur in areas previously disturbed by the construction of the hotel complex and ongoing operations. Repeated disturbance to soils from maintenance of underground utilities would result in local, short-term, minor, adverse impacts and a local, long-term, minor, adverse impact on soils in the project area. Use of Best Management Practices (Appendix E) to minimize spills, soil compaction, and erosion during construction activities would continue.

Continued use of the hardened earth low water crossing for fire department access south of the cottages, and continued use of the inadequately sized fire department access at the hotel, would result in minor to moderate impacts on soils from potential soil erosion and compaction. In addition, there would continue to be local, long-term, minor, adverse, indirect effects on soils from ongoing disruptions of natural groundwater flows and resultant effects on soil characteristics over time.

Cumulative Impacts

Localized short-term, adverse impacts on surface and sub-surface soils could result from construction activities associated with some of the past, current, and reasonably foreseeable actions planned or approved within the park. Most soils in the project area have been previously disturbed by historic construction pre-dating the construction of The Ahwahnee, construction of The Ahwahnee and associated structures (1927-1928), construction activities during the Navy hospital period (1943-1945), landscaping activities, and installation and maintenance of utility lines, roads, and paths. Recently completed projects which might have contributed to adverse impacts on soils within the project area include the *Replace Ahwahnee Dormitory Steam Line* project.

Current or reasonably foreseeable projects that could contribute to impacts on soils include the *Merced Wild and Scenic River Comprehensive Management Plan*, *Parkwide Invasive Plant Management Plan Update*, *Scenic Vista Management Plan*, *East Yosemite Valley Utilities Improvement Plan*, *The Ahwahnee Fire and Life Safety Improvements Project*, *The Ahwahnee Dormitory Foundation Rehabilitation Project*, and *The Ahwahnee Hotel Improve Porte Cochere Access Walkways and Fence* project. Implementation of these current and/or reasonably foreseeable future actions would likely have short-term adverse impacts due to construction activities. Specific impacts would depend upon the nature, location, and design of the action. Overall, the cumulative actions in combination with the No Action Alternative would result in a net local long-term, minor, adverse impact on soils.

Environmental Consequences of Alternatives 1, 2, and 3

The majority of actions proposed for the comprehensive rehabilitation of The Ahwahnee would occur within structures and would not affect soils. Therefore, only those actions that would affect soils are analyzed below.

The proposed actions that may impact soils are the same for all action alternatives, with only minor exceptions. Therefore, the action alternatives are analyzed together.

Analysis

Soil disturbance would primarily occur in areas with ‘resilient’ or ‘other’ soils that have been previously disturbed; however the depth of the previous disturbance is not known. Ongoing disruptions of natural subsurface flows that have impacts on soil characteristics are likely, due to the presence of the hotel, adjacent structures, paved and unpaved transportation/pedestrian corridors, and utilities. Fill material is likely present in the project area, but the locations and volumes are not known.

The following restoration and construction activities would result in the disturbance of surface and near-surface soil in the area immediately adjacent to or beneath the hotel, cottages, dormitory, and pavement; along existing service road corridors; and along existing pathways for all action alternatives.

Fire and Life Safety

Fire Department Access Road

Code-required improvements to fire truck access around the exterior of the hotel would require widening and extending the length of the existing turf-covered hardened base at the western and southern portions of the hotel. Soils along a segment of the proposed alignment have previously

been compacted and hardened to accommodate the existing fire access alignment built in the 1970s. New compaction and hardening would occur primarily in areas where the existing alignment would be altered and where the existing access route would be extended to the south and east of the hotel's south and east wings. Soil removal and soil profile mixing during excavation and grading activities, as well as soil compaction (to provide the improved, or in some areas new, 'hardened base') would disturb approximately 0.45 acre of what the 1991 soil survey mapped as 'resilient' soils. However, it is likely that a substantial proportion of the disturbed area is structural fill or imported soil ('other' soil), as it directly abuts the hotel/terrace footprint and the maintained turf lawn.

Code-required improvements to fire truck access to the cottages would require widening and leveling the existing service road and an unmaintained service road south of the cottages, replacing or installing gravel, and constructing a new turnaround area. This would result in short-term and long-term adverse impacts on 0.04 acre of 'resilient' soils and 0.58 acre of 'other' soils due to soil removal and soil profile mixing during excavation and grading activities.

In addition, short-term adverse impacts on approximately 0.02 acre of 'resilient' soils would result from the replacement of five existing culverts at drainage crossings in order to meet the width and load bearing requirements for a fire access road. The removal and profile mixing of soils during excavation would result in adverse impacts on soils. In areas of close proximity to drainage crossings, this would result in an increased risk for soil erosion and transport.

Similarly, short-term, adverse impacts on approximately 0.01 acre of 'other' soils would result from excavation activities during installation of a code-required bridge over an unnamed seasonal tributary east of the cottages. There would be an increased potential for soil erosion and transport due to the close proximity of a tributary. However, bridge installation may result in beneficial impacts on soils by removing the need for vehicles to drive through the seasonal tributary. This would reduce the potential for soil compaction, soil erosion, and promote improved surface water flow in an otherwise disturbed area.

Waterproofing

Code-required waterproofing improvements at the hotel basement would require the installation of a trench drain at the basement entry. This would result in short-term disturbance of less than 0.01 acre of 'resilient,' previously disturbed soils during excavation.

Seismic Strengthening

Bracing the Dining Room would require the installation of new footings to support new brace frame structures in the crawlspace below the kitchen. Excavation and installation of the footings would cause short-term and long-term disturbance to approximately 0.01 acre of 'resilient' soils from soil removal and soil profile mixing.

Accessibility

ADA-ABA compliant access to the South Mezzanine meeting rooms would be provided by installing a limited use-limited access elevator. This would require excavation to modify footings under the hotel, resulting in short-term and long-term impacts on less than 0.01 acre of 'resilient' soils.

Accessibility improvements to the wedding lawn access path would require minor grading and hardening of previously disturbed soils, resulting in short-term impacts on 0.04 acre of 'resilient' soils.

Operational Efficiency

The extension of a utility corridor underneath existing pathways to the cottage area would require the excavation and construction of a new, 4-foot deep trench. This would result in short-term and long-term impacts on 0.18 acre of ‘resilient’ and 0.07 acre of ‘other’ soils. However, consolidating utilities into the corridor would reduce the possibility of soil disturbance from repairs and maintenance on the existing, dispersed underground utilities.

Mitigation

Construction impacts would be minimized by limiting the area of disturbance, salvaging existing soils for use as backfill, and implementing best management practices (see Appendix E) that would reduce the potential for soil erosion and transport, and minimize contamination from construction equipment.

Conclusion: Impacts on soils under Alternatives 1, 2, and 3 would occur in areas previously disturbed by the construction of the hotel complex and ongoing operations, though some excavations could exceed the vertical extent of previously disturbances. The proposed actions to meet fire and life-safety, seismic, and accessibility codes and standards would impact approximately 0.75 acre of ‘resilient’ soils and 0.67 acre of ‘other’ soils. Construction impacts on soils would be mitigated by ongoing implementation of Best Management Practices to minimize spills, soil compaction, and erosion. This would result in a local, short-term and long-term, minor, adverse impact on soils in the project area. In addition, there would continue to be local, long-term, minor, adverse, indirect effects on soils from ongoing disruptions of natural groundwater flows and resultant effects on soil characteristics over time.

There would be a local, long-term, minor, beneficial impact on soils from the consolidation of underground utilities and the removal of a hardened earth low water crossing at the unnamed seasonal tributary east of the cottages.

Cumulative Impacts

Localized short-term, adverse impacts on surface and sub-surface soils could result from construction activities associated with some of the past, current, and reasonably foreseeable actions planned or approved within the park. Most soils in the project area have been previously disturbed by historic construction pre-dating the construction of The Ahwahnee, construction of The Ahwahnee and associated structures (1927-1928), construction activities during the Navy hospital period (1943-1945), landscaping activities, and installation and maintenance of utility lines, roads, and paths. Recently completed projects which might have contributed to adverse impacts on soils within the project area include the *Replace Ahwahnee Dormitory Steam Line* project.

Current or reasonably foreseeable projects that could contribute to impacts on soils include the *Merced Wild and Scenic River Comprehensive Management Plan*, *Parkwide Invasive Plant Management Plan Update*, *Scenic Vista Management Plan*, *East Yosemite Valley Utilities Improvement Plan*, *The Ahwahnee Fire and Life Safety Improvements Project*, *The Ahwahnee Dormitory Foundation Rehabilitation Project*, and *The Ahwahnee Hotel Improve Porte Cochere Access Walkways and Fence* project. Implementation of these current and/or reasonably foreseeable future actions would likely have short-term adverse impacts due to construction activities. Specific impacts would depend upon the nature, location, and design of the action. Overall, the cumulative actions in combination with Alternatives 1, 2, or 3 would result in a net local long-term, minor, adverse impact and a local, long-term, minor, adverse impact on soils.

Hydrology

Affected Environment

Surface Water

The Merced Wild and Scenic River flows along the southeastern boundary of the project area, flowing east and then south as it passes The Ahwahnee cottages. Royal Arch Creek, a small seasonal tributary to the Merced River, flows north to south between the hotel and the cottages. There is also a north-south unnamed seasonal Merced River tributary to the east of Royal Arch Creek and the cottages. Both of the seasonal tributaries flow primarily in winter, spring, and early summer, and are fed by a combination of groundwater, rainwater, and snowmelt from the cliffs to the north of the project area. There is little or no flow in these tributaries the rest of the year.

Five culverts direct surface water under the service road between the hotel and cottages area: a twin culvert at Royal Arch Creek, and a single pipe culvert and a twin pipe culvert at the unnamed seasonal tributary. These culverts are considered to be in good condition. However, the road to the cottages narrows to as little as 9 feet wide over these culverts; to comply with fire code, all existing culverts may need to be improved or replaced to support road widening to a code-compliant width. In addition, it is not known if the existing culverts comply with fire code load-bearing requirements.

There is a low-water crossing on the unmaintained service road that crosses a braided segment of the unnamed seasonal tributary. Low-water crossings are not compliant with current fire code requirements for all weather emergency access, and emergency vehicles and firefighters may not be subject to passing through water, ice, or soft roadbeds.

Groundwater

In general, groundwater elevations fluctuate based on seasonal precipitation, irrigation, land use, and climatic conditions. Groundwater elevations within the project area vary seasonally, being higher in the spring and early summer than during the remaining portions of the year. During spring, groundwater levels may be at or near the surface in some areas (e.g., the hotel and dormitory crawl spaces), and sump pumps are used to dewater basement areas and subgrade vaults on the property. Based on soil boring data collected in May 2009 (see ‘Soils’ section, above), free water was encountered between 2 and 5 feet below ground surface (bgs) in the immediate vicinity of The Ahwahnee hotel and across the meadow. In August 2009, free water was observed in a soil boring next to The Ahwahnee dormitory at 6 feet bgs (Moore Twining Associates Inc. 2009) and between 10.5 and 13 feet bgs in three soil borings next to the hotel (Treadwell & Rollo 2009).

Hydrologic Processes

In general, hydrologic processes within the project area between The Ahwahnee and the Merced River have been substantially altered by construction of the hotel, cottages, dormitory, parking areas, roads, utilities, and pathways. In addition, ongoing landscaping activities at The Ahwahnee, such as irrigation, affect local hydrology.

Seasonally high groundwater levels are impacting the hotel through seepage at existing foundation walls and the slab floor in the basement. The hotel’s main electrical distribution panels are located in the basement; water intrusion results in hazardous conditions for

maintenance staff. Surface runoff also enters the generator room, which has a below-grade floor, from the service yard. Sump pumps are routinely used to dewater the hotel basement and crawlspaces, as well as utility vaults, during wet periods. Water ponding also occurs near the dormitory and in parts of the parking lot during seasonal runoff and precipitation events, and contributes to icy conditions and related pedestrian safety hazards in the winter. The pedestrian safety hazards are being addressed through a separate project (see Appendix D: Cumulative Plans and Projects and ‘Cumulative Impacts,’ below.)

Environmental Consequences – Methodology

The impact analysis for hydrologic resources was based on a qualitative assessment of the duration, intensity, type and context of the impact, as described below.

Context: Localized impacts would occur in the immediate vicinity of an action or in a nearby area that would be indirectly affected by an action.

Duration: Short-term impacts would occur during project implementation (e.g., construction) and would be less than 2 years in duration after construction is complete. Long-term impacts would remain after the alternative has been implemented and would be longer than 2 years in duration.

Intensity: Negligible impacts would not be detectable and would have no discernable effect on hydrology. Minor impacts would be slightly detectable, but would not be expected to have an impact on overall hydrology of the area. Moderate impacts would be clearly detectable and would have an appreciable impact on hydrology. Major impacts would be substantial, with a highly noticeable influence on hydrology.

Type: Adverse impacts would alter natural hydrologic conditions (e.g., impede flow, cause unnatural erosion, alter the water table, etc.) or degrade water quality. Beneficial impacts would restore natural hydrologic conditions or improve water quality.

Environmental Consequences of the No Action Alternative

Analysis

Under the No Action Alternative, there would be no new impacts on hydrology. The ongoing impacts of the hotel and related facilities (e.g., impacts on surface and groundwater flow from existing infrastructure) and activities (e.g., irrigation) on local natural hydrologic processes would continue.

Seasonally high groundwater levels would continue to cause seepage into crawlspaces, vaults, and the basement. Where electrical equipment, such as the hotel’s main electrical distribution panels and the emergency generator, is located, wet conditions could contribute to hazardous conditions for maintenance staff. Groundwater and surface water infiltration would also continue to contribute to deterioration of historic fabric and increase maintenance requirements.

Conclusion: Under the No Action Alternative, there would be no new impacts on local natural hydrologic processes at The Ahwahnee. Seasonally high groundwater would continue to create hazardous conditions in the hotel basement and seasonal runoff would continue to enter the generator room. The presence of the hotel and related facilities, as well as associated landscaping activities, would continue to have a local, long-term, minor to moderate, adverse impact on local hydrologic conditions.

Cumulative Impacts

Construction activities that modified local hydrology in the project area began as early as 1869, and continued through the construction of The Ahwahnee in 1927 and subsequent expansion and modification of infrastructure in the area. The 2011 *Improve Porte Cochere Access Walkways and Fence*, Phase 1, corrected some of the ponding and ice-damming problems near the hotel entrance.

Current or foreseeable approved plans that could impact hydrology in the project area would include the *Merced Wild and Scenic River Comprehensive Management Plan* and the *East Yosemite Valley Utilities Improvement Plan*, both of which could result in short-term adverse impacts on hydrology from construction or restoration activities, but would likely result in long-term beneficial impacts from needed upgrades to aging water/wastewater infrastructure and guidance for protection of river values (including free flow and water quality) in Yosemite Valley. Phase 2 of the *Improve Porte Cochere Access Walkways and Fence* project would further correct ponding and icy conditions along the entry board walk west of the bellman station by regarding, adding drains, and conveying surface runoff to the existing storm drain system.

Overall, the cumulative actions in combination with the No Action Alternative would result in localized short-term, minor, adverse impacts from construction activities, and local, long-term, minor, beneficial impacts on hydrology in Yosemite Valley.

Environmental Consequences of Alternatives 1, 2, and 3

The proposed actions that may impact hydrology are the same for all action alternatives, with only minor exceptions. Therefore, the action alternatives are analyzed together.

Analysis

Fire Department Access Road

The existing fire access road terminates at the service entrance to the cottages. In order to meet fire code access requirements, the existing access road would be extended to include the unmaintained service road on the south side of the cottage area. As part of this action, a bridge would be constructed over the unnamed seasonal tributary to provide code-compliant emergency vehicles and personnel access to the cottages. Excavation and construction of the bridge abutments could result in short-term, adverse impacts on surface flow and water quality associated with the temporary disruption of the stream channel and the increased potential for soil erosion and sediment transport. The use of heavy equipment at the banks of the tributary could result in accidental releases of fuels or other hazardous substances that could impact water quality. The development of a stormwater pollution prevention plan and a spill prevention/response plan (see Appendix E: Mitigation Measures) would help avoid or minimize potential impacts from hazardous materials during construction.

Construction impacts would be further minimized by scheduling construction activities during seasonal periods of low or no water, as this small seasonal tributary is usually dry by late summer. Additional mitigation measures would include constructing abutments above the ordinary high water mark, minimizing the disturbance area at the banks of the tributary, salvaging excavated materials for replacement after construction, returning the banks of the tributary to their pre-existing contours, and implementing Best Management Practices (Appendix E) during construction. These measures would be expected to reduce short-term adverse impacts to a minor to moderate level.

In the long-term there would be a minor to moderate, beneficial impact from removing the existing low water crossing on the seasonal tributary. Although travel on this road is only occasional, replacing the low water crossing with a bridge would decrease the potential for erosion and sediment transport caused by vehicles driving over banks and through the stream bed. In the long-term, the bridge itself would be expected to have a negligible adverse impact on hydrologic processes, due to bridge placement outside of the ordinary high water mark, and bridge design to accommodate braided stream flow to the extent feasible.

Improvement or replacement of culverts on the existing service road to meet road width and load-bearing code requirements would result in short-term impacts during construction and excavation similar to those noted above for bridge construction, but within a smaller area. Mitigation proposed would likewise be similar to those noted above for the bridge. However, culvert work would occur within the bed and banks of the tributaries and work would occur within the ordinary high water mark.

Installation of a consolidated subsurface utility corridor from the hotel to the cottages would require crossing Royal Arch Creek. Future design will dictate the exact configuration and dimensions of the utility corridor; however, it is anticipated that utilities would be suspended beneath the existing footbridge over Royal Arch Creek, resulting in no impacts on the free flow of the tributary.

Seismic Strengthening, Accessibility Compliance, and Operational Efficiency

Groundwater levels may vary during the construction phase and design life of the project; however, based on the results of geotechnical investigations in the project area, it is anticipated that groundwater could be encountered at any time during excavation. Excavation necessary for new footings below the hotel (for seismic strengthening and installation of an ADA-compliant elevator) and trenching for the proposed utility corridor to the cottages would likely require dewatering activities. For unsupported excavation sidewalls, the dewatering would have to be effective to a depth sufficient to prevent interstitial seepage. Depending on the location of discharge, dewatering activities associated with these actions would present short-term adverse impacts on the adjacent meadow and/or Royal Arch Creek. In addition, the use of heavy equipment would present a potential for accidental releases of fuels or other hazardous substances that could impact local surface water or groundwater quality. Implementation of Best Management Practices (Appendix E) would mitigate these potential impacts to a minor to moderate intensity.

In order to minimize long-term impacts on subsurface facilities, all trench backfill would be properly placed and adequately compacted to provide a stable subgrade. In addition, during the final design phase for the utility corridor, adequate drainage should be provided to prevent surface water or subsurface seepage from saturating the utility corridor.

The proposed site drainage improvements at the basement and back dock would be expected to have a long-term, beneficial impact on local hydrology by redirecting subsurface flow from the basement toward Ahwahnee Meadow. In addition, waterproofing the hotel basement would have a long-term, beneficial impact on the structure and would reduce risks to maintenance staff working with electrical equipment.

Conclusion: Excavation and construction activities to replace culverts and install a bridge at seasonal tributaries could result in adverse impacts associated with the temporary disruption of the surface flow and the increased potential for soil erosion and sediment transport. In addition, the use of heavy equipment in these areas could result in accidental releases of hazardous

substances that would impact water quality. Mitigation measures (Appendix E) would include scheduling construction activity during seasonal periods of low or no water, minimizing disturbance areas, salvaging excavated materials, restoring contours of stream banks, and implementing construction best management practices. These measures would be expected to reduce short-term, adverse impacts on hydrology to a minor to moderate level.

Excavation beneath the hotel and the installation of a utility corridor would likely require dewatering activities, which would potentially result in short-term, adverse impacts on the adjacent meadow and Royal Arch Creek. Mitigation measures (Appendix E) would be implemented during construction activities to ensure that dewatering would not increase sediment loading at drainages or otherwise adversely affect the adjacent meadow. Implementation of these measures would reduce excavation impacts to local, short-term, minor, and adverse.

In the long-term, there would be a minor to moderate beneficial impact on the unnamed seasonal tributary east of the cottages from removal of a low water vehicle crossing. In addition, installation of site drainage at the hotel basement and back dock would have a local, long-term, moderate, beneficial impact on hydrology by redirecting drainage toward Ahwahnee Meadow.

Cumulative Impacts

Past projects, current approved actions, or foreseeable actions would be the same as under the No Action Alternative. The cumulative actions in conjunction with Alternatives 1, 2, or 3 would result in a net local, short-term, minor to moderate, adverse impact on hydrology and a long-term, minor, beneficial impact on hydrology. The potential impacts of this project on tributaries to the Merced Wild and Scenic River are evaluated in accordance with section 7 of the Wild and Scenic Rivers Act in Appendix F.

Vegetation

Affected Environment

Yosemite Valley, including the area surrounding The Ahwahnee, is in the lower montane forest, a mixed conifer vegetation zone ranging from 3,000 to 6,000 feet in elevation. Dominant trees in this zone are incense-cedar, black oak, ponderosa pine, white fir, and sugar pine. This mid-elevation zone is the lowest zone that regularly receives a majority of its precipitation in the form of snow. The climate makes this zone predominantly a forest type, with intermittent riparian areas and meadows.

Vegetation in the project area consists of a mix of native and ornamental species, much of which has been manicured to emphasize the hotel as the visual focal point. Landscaping activities immediately surrounding the hotel and associated buildings include pruning, raking, removal of invasive non-native species, fertilizing, irrigating, and transplanting or seeding with native plants. Areas that are fertilized and irrigated include the main Ahwahnee lawn, the hotel entrance (flagpole area), the wedding lawn, The Ahwahnee cottage area, the Royal Arch Creek area between the swimming pool and the foot path over the creek, the ‘wildflower meadow,’ and the Dining Room terrace. Irrigation water is drawn from both domestic sources and the Merced River between March and October. Selective clearing and trimming of vegetation has also occurred for hazard tree management, routine maintenance along roads and utility corridors, and scenic vista management.

Table 3-2 presents the native and ornamental species have been documented within the project area (AECOM and ARG 2011):

Table 3-2 Native and Ornamental Vegetation in the Project Area	
DECIDUOUS TREES	EVERGREEN TREES
<ul style="list-style-type: none"> ▪ vine maple (<i>Acer circinatum</i>) ▪ big-leaf maple (<i>Acer macrophyllum</i>) ▪ red maple (<i>Acer rubrum</i>) ▪ Western redbud (<i>Cercis occidentalis</i>) ▪ Pacific dogwood (<i>Cornus nuttallii</i>) ▪ quaking aspen (<i>Populus tremuloides</i>) ▪ black cottonwood (<i>Populus trichocarpa</i>) ▪ California black oak (<i>Quercus kelloggii</i>) ▪ black oak (<i>Quercus velutina</i>) ▪ red willow (<i>Salix</i> sp.) ▪ apple (<i>Malus</i> sp.) 	<ul style="list-style-type: none"> ▪ white fir (<i>Abies concolor</i>) ▪ incense cedar (<i>Calocedrus decurrens</i>) ▪ knobcone pine (<i>Pinus attenuata</i>) ▪ Jeffrey pine (<i>Pinus jeffreyi</i>) ▪ ponderosa pine (<i>Pinus ponderosa</i>) ▪ Western white pine (<i>Pinus monticola</i>) ▪ lodgepole pine (<i>Pinus contorta</i> ssp. <i>murrayana</i>) ▪ douglas fir r (<i>Pseudotsuga menziesii</i>) ▪ giant sequoia (<i>Sequoiadendron giganteum</i>) ▪ California laurel (bay) (<i>Umbellularia californica</i>) ▪ canyon live oak (<i>Quercus chrysolepis</i>)
SHRUBS	HERBACEOUS PLANTS
<ul style="list-style-type: none"> ▪ white alder (<i>Alnus rhombifolia</i>) ▪ common manzanita (<i>Arctostaphylos viscida</i>) ▪ California allspice (<i>Calycanthus occidentalis</i>) ▪ elderberry (<i>Sambucus cerulea</i>) ▪ English holly (<i>Ilex aquifolium</i>) ▪ juniper (<i>Juniperus</i> spp.) ▪ Western chokecherry (<i>Prunus virginiana</i> var. <i>demissa</i>) ▪ Sierra coffeeberry (<i>Rhamnus rubra</i>) ▪ Pacific rhododendron (<i>Rhododendron macrophyllum</i>) ▪ Western azalea (<i>Rhododendron occidentale</i>) ▪ Sierra currant (<i>Ribes nevadense</i>) ▪ Western raspberry (<i>Rubus leucodermis</i>) 	<ul style="list-style-type: none"> ▪ purple milkweed (<i>Asclepias cordifolia</i>) ▪ scouring rush horsetail (<i>Equisetum hyemale</i>) ▪ field horsetail (<i>Equisetum arvense</i>) ▪ cinquefoil (<i>Potentilla</i> sp.) ▪ bracken fern (<i>Pteridium aquilinum</i>) ▪ Northern goldenrod (<i>Solidago multiradiata</i>) ▪ bleeding heart (<i>Dicentra</i> sp.) ▪ trillium (<i>Trillium angustipetalum</i>) ▪ Western columbine (<i>Aquilegia formosa</i>) ▪ large periwinkle (<i>Vinca major</i>) ▪ California wild grape (<i>Vitis californica</i>) ▪ perennial pea (<i>Lathyrus latifolius</i>) ▪ meadow grasses and lawn grasses ▪ ferns

Environmental Consequences - Methodology

Vegetation analysis was based on a qualitative assessment of project area vegetation and the anticipated impacts of construction activities in the project area.

Natural processes, such as fluctuations in precipitation and groundwater availability, sustain many plant communities. This impact analysis considered whether changes would occur that affect opportunities for natural processes to take place.

Non-native species can alter soil chemical and physical properties, hamper native species establishment, and ultimately alter native plant community structure and function. This impact analysis considered whether the proposed actions would favor the establishment of non-native species, as well as the ability to contain and reverse non-native plant infestation.

Context: For the purposes of this analysis, all impacts on vegetation communities are considered to be local.

Intensity: The intensity of an impact on vegetation is a measure of perceptible changes in native plant community size, continuity, or integrity. Impact intensity is characterized as negligible, minor, moderate, or major. Negligible impacts are those that would have no measurable or perceptible changes in native plant community size, continuity, or integrity. Minor impacts would be measurable or perceptible, but would be localized within an isolated area, and the overall viability of the native plant community would not be affected. Moderate impacts would cause a measurable and perceptible change in the native plant community (e.g., size, continuity, or integrity); however, the impact would remain localized and could be reversed. Major impacts

would be substantial and highly noticeable and could be permanent in their effects on native plant community size, diversity, continuity, or integrity.

Duration: The duration of an impact is the time required for native plant communities to recover from the implementation of an alternative. The duration of impact is characterized as short-term or long-term. A short-term impact would have an immediate effect on the size, continuity, or integrity of native plant communities and is usually associated with transitional types of activities, such as facility construction. In general, short-term impacts on vegetation are those that would last up to 20 years following implementation of an alternative. Long-term impacts would lead to a loss in the size, continuity, or integrity of native plant communities. In general, long-term impacts would last longer than 20 years after implementation of an alternative.

Type: Impacts are considered adverse if implementation of an alternative would reduce the size, continuity, or integrity of a native plant community. Impacts are considered beneficial if implementation of an alternative would increase the size, continuity, or integrity of a native plant community.

Environmental Consequences of the No Action Alternative

Analysis

Under the No Action Alternative, there would be no new impacts on native vegetation. Vegetation within the project area would continue to be a mixture of native and ornamental species, the project area would continue to be actively landscaped, and selective clearing and trimming of vegetation would continue to occur under the guidance of parkwide management for hazard tree removal, scenic vista clearing, and routine maintenance activities.

Conclusion: Under the No Action Alternative, there would be no change in vegetation and vegetation management activities. The No Action Alternative would not further reduce the size or disrupt the continuity and/or integrity of native plant communities in the project area. There would be no new impacts on vegetation resources.

Cumulative Impacts

Past projects which contributed to impacts on vegetation within the project area include: the construction and expansion of facilities in the project area beginning in the late 1800s; construction of The Ahwahnee hotel and associated structures; landscaping activities that were designed to accentuate the hotel as well as scenic vistas to and from the hotel; installation of recreational features such as a golf course at The Ahwahnee grounds; installation of utilities; and installation of roads and parking areas. These actions resulted in highly disturbed native vegetation within the project area and in the project vicinity.

Current or foreseeable approved actions under the park's *Invasive Plant Management Plan Update*, *2009 Fire Management Plan*, and *Scenic Vista Management Plan* could result in the removal of vegetation within the project area. Removal of native vegetation would be considered an adverse impact, while the removal of non-native invasive vegetation would be considered a beneficial impact. Reasonably foreseeable future actions with the potential to affect vegetation include the *Merced Wild and Scenic River Comprehensive Management Plan*, which may include short-term disturbance as well as long-term restoration activities. In conjunction with the past, present, and reasonably foreseeable future projects, the No Action Alternative would have a localized, long-term, negligible, adverse impact on native vegetation.

Environmental Consequences of Alternatives 1, 2, and 3

The proposed actions that may impact vegetation are the same for all action alternatives, with only minor exceptions. Therefore, the action alternatives are analyzed together.

Analysis

Under Alternatives 1, 2, and 3, short-term impacts on vegetation would occur from construction activities during the upgrading of the fire department access roads, installation of utilities, and the provision of ADA-compliant pathways. The affected area is already highly disturbed by previous construction, ornamental landscaping, and pedestrian and vehicular traffic. Minor short-term impacts would include temporary removal and trampling of vegetation, as well as soil disturbance. Long-term impacts on native vegetation would occur where existing roads and paths would be widened and graveled.

Fire Department Access Roads

The existing fire access route on the western and southern side of the hotel is a turf-covered corridor with a hardened aggregate base that was constructed in the 1970s. This corridor would be realigned, reinforced, widened where needed, and extended to the eastern side of the south wing of the hotel to improve compliance with current fire code requirements. This action would impact a manicured area that contains a mixture of native and ornamental species. No trees would be removed as part of the action. Therefore the impact on native vegetation would be negligible to minor, and short-term.

Vegetation would be impacted in areas immediately adjacent to the existing gravel service road from the hotel to the cottages and the existing hardened earth service road south of the cottages, where the road would be widened to 16-feet to meet code requirements, and a new hardened turnaround area would be added near the end of the extended road. Code-required improvements to these roads would include the removal of select incense cedars that are immediately adjacent to the road corridor. In addition, some trees may be limbed to meet vertical clearance requirements for emergency vehicle access. Construction of the turnaround to the south of the cottages would occur in an area of disturbed vegetation; no tree removal would be expected.

Pathways

Herbaceous vegetation may be removed during installation of a utility corridor under the existing path from the hotel to the cottages and between the cottages. In the long-term, hardening this pathway to the cottages to meet ADA requirements would result in negligible impacts on vegetation.

The existing hardened earth path from the hotel to the wedding lawn would be further improved by minor leveling and hardening with a permeable resin surface. Because the path is already hardened and free of vegetation, the addition of a resin surface would result in negligible impacts on adjacent vegetation.

No wetland vegetation would be impacted as part of the proposed actions. The installation of Best Management Practices (Appendix E) as part of construction activities would reduce potentially sediment-laden and/or contaminated water runoff from impermeable surfaces from affecting nearby vegetation in riparian and wet meadow communities in the vicinity of the project area.

Conclusion: Under Alternatives 1, 2, and 3, construction activities would result in local, short-term, minor, adverse impacts on the size and continuity of native plant communities. Implementation of Best Management Practices during construction would minimize impacts on surrounding vegetation communities. The removal of select trees to meet fire code requirements along fire access roads and the hardening of select pathways to meet accessibility requirements would result in local, long-term, minor, adverse impacts on the size and continuity of native plant communities.

Cumulative Impacts

The list of past projects, current approved actions, or foreseeable actions that may have a cumulative impact on the project area would be the same as provided under the No Action Alternative. In conjunction with these, Alternatives 1, 2, or 3 would have a localized, long-term, minor, adverse impact on vegetation.

Wildlife

Affected Environment

Wildlife in the Vicinity of The Ahwahnee

Non-special status wildlife species identified as likely present within the proposed Ahwahnee project area include deer mice (*Peromyscus maniculatus*), western gray squirrels (*Sciurus griseus*), broad-footed moles (*Scapanus latimanus*), Botta's pocket gophers (*Thomomys botti*), black bears (*Ursus americanus*), mule deer (*Odocoileus hemionus hemionus*), coyotes (*Canis latrans lestes*), ringtail (*Bassariscus astutus raptor*), and raccoons (*Procyon lotor psora*). There are also several species of bat likely to occur in or near the project area, including special status species (further described below, under 'Special Status Species.')

Wildlife Habitat in the Project Area

The constant presence of people in the project area results in a reduced habitat value compared to those areas in which people are not present. Wildlife habitat in the project area consists of mixed conifer and California black oak communities (upland) and other (urban) vegetation associated with ornamental landscaping at the hotel grounds. There are wet meadow communities adjacent to the project area.

Upland Habitat

Variability in canopy cover and understory vegetation make the conifer habitat suitable for a wide variety of wildlife species, such as black bears, acorn woodpeckers (*Melanerpes formicivorus*), and band-tailed pigeons (*Patagioenas fasciata*). Denser stands of montane hardwood conifer are a favored habitat of California spotted owls (*Strix occidentalis occidentalis*); mast crops produced by trees are an important source of food to wildlife in this habitat and mature forests provide cavities for nesting birds.

Acorns provided by California black oak in Yosemite Valley are an important source of food to a variety of wildlife. Mule deer and black bears forage extensively in this habitat in years of good acorn production. Acorn woodpeckers, as their name suggests, are highly dependent on this food source. Gray squirrels, ground squirrels (*Spermophilus spp.*), deer mice, and band-tailed pigeons also feed heavily on acorns. The large, mature California black oaks also provide cover and nesting habitat for species such as great-horned owls (*Bubo virginianus*). Pallid bats (*Antrozous*

pallidus) favor mature oaks as roost sites. Many small birds such as ruby-crowned kinglets (*Regulus calendula*), yellow-rumped warblers (*Dendroica coronata auduboni*), and western bluebirds (*Sialia mexicana*) glean the foliage for insects or hawk them in the understory.

Other Habitat

The urban habitat type found in the project area is composed primarily of stands of native and ornamental vegetation interspersed with development. Vegetation can be similar in complexity to less-disturbed habitats, with California black oak, ponderosa pine, and incense-cedar as canopy species, and a shrub understory. The quality of these habitats for wildlife is limited by their small sizes and their proximity to human activity. Structures in developed areas can, however, provide nesting or roosting habitat for species such as cliff swallows (*Hirundo pyrrhonota*) and several species of bats.

Meadow Habitat

The project area contains no meadow habitat, however there is a meadow southwest of the building that abuts the project area and Ahwahnee Meadow is south of the project area. While shrubs and trees are usually absent or sparse in meadows, they can be an important habitat component in the wet meadow and around its edge. Within the herbaceous plant community, habitat layers are often present on a smaller scale, with different plant species growing to different heights. Wet meadows are generally too wet for small mammals during periods of high water, but they are an important source of green vegetation in summer for herbivores such as mule deer. Birds such as mallards (*Anas platyrhynchos*) and red-winged blackbirds (*Agelaius phoeniceus*) nest in wet meadows, where the water and tall vegetation can be barriers to predators. Amphibians may breed in the shallow waters found in this habitat.

Environmental Consequences – Methodology

Wildlife analysis was based on a qualitative assessment of wildlife either known to occur or that could occur in the project area and the effects anticipated as a result of construction activities.

Context: Due to the limited and localized nature of the proposed actions that could affect wildlife, impacts would be detectable only locally, within the vicinity of the proposed action. No regional impacts would be expected.

Duration: Short-term impacts are those that would have an immediate effect on native habitat, diversity, and native wildlife populations, but would not cause long-term declines in populations or diversity. Long-term impacts are those that would lead to a loss of native habitat, diversity, and species populations as exhibited by a decline in species abundance, viability, and/or survival.

Intensity: The intensity of the impact considers effects of an action on the size and integrity of native habitats, diversity, and species population. Negligible impacts would induce no measurable or perceptible changes on wildlife habitat or populations. Minor impacts would be localized within a relatively small area, and the impacts on the integrity of animal populations would not be expected to have an overall effect on natural community structure. Without further impacts, negative effects may be reversed, and habitat quality would recover. Moderate impacts would be those clearly detectable on wildlife habitat and populations and would be sufficient to cause a change in the abundance, distribution, quantity, or integrity of species; community ecology (e.g., the number of different kinds of species present); or natural processes (e.g., hydrology). Major impacts would be substantial and highly noticeable, with the potential for permanent landscape-

scale changes in the distribution, quantity, or integrity of species; community ecology; or natural processes.

Type: The type of impact considers whether the impact would be beneficial or adverse. Impacts are considered beneficial if an action causes no detrimental effect and results in an increase in the size or integrity of species populations or habitat components, native ecosystem processes, native species richness/diversity, or native habitat quantity and quality. Impacts are considered adverse if they degrade the size, integrity, or diversity of native habitat quantity and quality.

Environmental Consequences of the No Action Alternative

Analysis

Ongoing habitat disturbance from human activities at The Ahwahnee include noise, human presence, vehicle traffic, and artificial light. Current levels of human use and vehicular disturbance would continue. Under the No Action Alternative, there would be no new impacts on wildlife.

Conclusion: Under the No Action Alternative, there would be no new impacts on wildlife habitat or populations.

Cumulative Impacts

Past projects that have contributed to habitat disturbance within the project area include the construction and expansion of facilities in the project area beginning in the late 1800s. Recent projects that have contributed to adverse impacts on wildlife within the project area include construction repairs conducted under the *2009 Interim Rockfall Parking Plan* and the rehabilitation or replacement of braking pads and asphalt roads under the *Yosemite Valley Shuttle Bus Stop Improvements project*. These actions would have resulted in minor, adverse, impacts on wildlife habitat within the project area due to short-term disturbance associated with construction, including noise, increased human presence, and use of heavy equipment.

Current or reasonably foreseeable projects that could result in adverse impacts on wildlife include the *2009 Fire Management Plan*, which could result in short-term, minor adverse impacts from vegetation removal. In the long term, fire management would have a beneficial impact on wildlife by improving habitat and reducing the chances of catastrophic fire in the vicinity. Beneficial impacts on wildlife may also result from the *Merced Wild and Scenic River Comprehensive Plan* and the *Invasive Plant Management Plan Update*, as they would address resource protection and habitat restoration issues and removal of nonnative species.

Improvement projects that may adversely impact wildlife within the project area include, the *Scenic Vista Management Plan*, which could include mechanical thinning, and trimming of vegetation to restore views, and the *East Yosemite Valley Utilities Improvement Plan*, which may result in habitat removal and disturbance, and short-term visual and noise disturbance associated with construction. These projects could result in negligible to minor, short-term and long-term, adverse impacts.

Overall, the cumulative actions in combination with the No Action Alternative could result in local, short-term and long-term, negligible to minor, adverse impacts, and local, long-term, moderate, beneficial impacts on wildlife habitat and populations.

Environmental Consequences of Alternatives 1, 2, and 3

The proposed actions that may impact wildlife are generally the same for all action alternatives, with only minor exceptions. Therefore, the action alternatives are analyzed together.

Analysis

Short-term adverse impacts on wildlife habitat and populations resulting from construction activity would include increased noise disturbance, increased human presence, heavy equipment use, and increased vehicle traffic. In addition to ongoing impacts resulting from normal hotel operations and visitor use, the impacts of construction activity are expected to be minor.

Habitat disturbance during project implementation would occur in primarily in upland and ‘other’ habitat, in the manicured landscape surrounding the hotel and cottages. There is no meadow habitat in the project area, however there is meadow habitat adjacent to the project area. Wildlife species that use the meadow for foraging or nesting may be impacted by construction activities.

Impacts on wildlife habitat and populations, including wildlife that may be resident in the structures (e.g., bats), would be minimized or avoided with the implementation of mitigation measures described in the wildlife section of Appendix E. These measures would include preconstruction surveys and limiting construction activities during critical breeding and nesting times for bird and bat species, in particular.

In the long term, there would be minor, adverse impacts from disturbance to upland and other habitat from improvements made to the fire department access road to the cottages, including widening of the road, removal of select incense cedars closest to the access road, and tree limbing to meet vertical clearance requirements. These impacts would be mitigated through preconstruction surveys, limiting construction periods, and consultation with the park wildlife biologist (see Appendix E).

Conclusion: Habitat in the project area is already disturbed from previous alterations to native vegetation, construction of facilities, and normal hotel operations. With the implementation of mitigation measures for wildlife species (Appendix E), temporary habitat disturbance from construction activities would result in local, short-term, minor, adverse impacts. There would be a local, long-term, minor, adverse impact on upland habitat from removal of select trees and some road widening for fire access road improvements. Implementation of mitigation measures with a focus upon avoidance, limiting construction activities during breeding seasons, and conducting surveys immediately before construction, would minimize impacts on wildlife habitat and populations.

Cumulative Impacts

The list of past projects, current approved actions, or reasonably foreseeable actions that may have a cumulative impact on the project area would be the same as provided under the No Action Alternative. In conjunction with these, Alternatives 1, 2, or 3 would have a local, short-term, negligible to minor, adverse impacts, and local, long-term, moderate, beneficial impacts on wildlife habitat and populations.

Special Status Species

Overview

The U.S. Fish and Wildlife Service (USFWS) and the State of California Department of Fish and Game (CDFG) classify threatened, endangered, or rare species of plants and animals as those that have undergone serious national, state, or local declines, and which may be threatened with extinction if not otherwise protected. Species that are being monitored because they are undergoing noticeable declines or are threatened by significant loss of habitat, but are not protected by law, may be categorized by the state as rare or sensitive.

Federal and state regulations, including section 7 of the 1973 Endangered Species Act (ESA), Council on Environmental Quality (CEQ) regulations, as well as NPS *Management Policies 2006* (NPS 2006a), require all federal agencies to conduct an impacts analysis and consult with the USFWS to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or their designated critical habitat.

In addition, CEQ regulations for implementing NEPA (section 1508.27) also require considering whether the proposed action may violate federal, state, or local law or requirements imposed for the protection of the environment. For this reason, species listed under the California Endangered Species Act or accorded special status by the California Department of Fish and Game (i.e., species considered rare or sensitive and monitored by the California Natural Diversity Database) are included in this analysis.

Special Status Species Considered

Special Status Wildlife Species

For the purposes of this assessment, “special status species” are defined as those that are: listed by the USFWS as endangered, threatened, proposed, or candidate; or, listed by the State of California as endangered, threatened, candidate, species of special concern, fully protected, or bird species of special concern. Based on species lists obtained from the USFWS and the CDFG, reported observations, scientific research, and professional judgment on the part of NPS staff, a list of 23 special status wildlife species that have the potential to occur in Yosemite Valley was developed (Table 3-3). From this list, NPS staff determined that 19 special status wildlife species are known or have the potential to occur in the project vicinity of The Ahwahnee Comprehensive Rehabilitation Plan, and are discussed in more detail below.

Special Status Plant Species

The National Park Service has determined that no special status plant species occur, or are likely to occur, or would be affected by the proposed action.

Federal Special Status Species

There are no federally listed threatened, endangered, proposed, or candidate species that are known to occur or have the potential to occur in the project vicinity. The National Park Service will consult with the U.S. Fish and Wildlife Service to obtain an updated list of federally endangered or threatened species prior to project implementation.

Federally Designated Critical Habitat

No critical habitat has been designated for any federally listed species within the project area.

State of California Special Status Species

Of the 19 species that are known or have the potential to occur in the project area, 3 bird species are listed as endangered, 3 bird species are listed as a fully protected, and 9 bird species are listed as species of special concern by the state of California. In addition 5 bat species are listed as California species of special concern.

Special Status Species Categories

The various federal and state categories for special status species considered for this analysis are defined below:

Federal threatened: Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its national range.

Federal candidate: Candidate species are plants and animals for which the U.S. Fish and Wildlife Service has sufficient information on their biological status and threats to propose them as endangered or threatened under the Endangered Species Act, but for which development of a proposed listing regulation is precluded by other higher priority listing activities. Federal Candidate Species are also known as “warranted but precluded.”

California endangered: Any species that is in danger of extinction throughout all or a significant portion of its range in the state.

California threatened: Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its state range.

California species of special concern: Any species that may become vulnerable to extinction on a state level from declining population trends, limited range, and/or continuing threats; could become threatened or endangered.

**Table 3-3
Special Status Wildlife Species in Yosemite Valley**

Species	Federal ESA ¹	State CESA ²	Habitat Type	Potential Occurrence in Project Area	Selected for Further Analysis
AMPHIBIANS					
Mount Lyell salamander (<i>Hydromantes platycephalus</i>)		CSC	High elevation, 2100 to 3700 m (6,890 to 12,139 ft), snowmelt seep and waterfall habitat throughout the Sierra Nevada. Several populations of Mount Lyell salamanders at lower elevation in the spray zones of waterfalls in Yosemite Valley (1200 to 1300 m (3,937 to 4,265 ft) and in riparian areas at lower elevation, 1400 to 2000 m (4,593 to 6,562 ft).	Not likely. Believed restricted in range; known from several locations in Yosemite Valley, but habitat is not likely in project area.	Dismissed
BIRDS					
harlequin duck (<i>Histrionicus histrionicus</i>)		CSC, BSSC	Breeding range includes Sierra Nevada. Breed along clear, fast - flowing rivers and streams with substantial streamside vegetation.	Low. Habitat may be adjacent to project area.	Yes
northern goshawk (<i>Accipiter gentilis</i>)		CSC, BSSC	Moderately dense coniferous forests between 1500 and 2700 meters (4920 and 8860 ft). Hunt in a variety of vegetative cover, including meadow edges.	Medium. Most observations in Merced River corridor are from Yosemite Valley.	Yes
northern harrier (<i>Circus cyaneus</i>)		CSC, BSSC	Nest on the ground. Favor open areas such as grasslands, meadows, wetlands, and agricultural clearings. Rarely seen migrant in Yosemite.	Medium. Majority of observations in the park are from meadows in Yosemite Valley.	Yes
golden eagle (<i>Aquila chrysaetos</i>)		CFP	Favor grasslands and areas of shrubs or saplings, and open-canopied woodlands of blue oaks. Can range above tree-line in summer. Hunt in meadows, clearings, rock outcroppings, granite shelves, fell fields, talus, and other open or openly wooded habitats.	Medium. Majority of observations from Merced River corridor are from Yosemite Valley.	Yes
bald eagle (<i>Haliaeetus leucocephalus</i>)		CE, CFP	Favor lakes and rivers with abundant prey (mostly fish) and large trees in which to nest.	Medium. Suitable habitat is present.	Yes
peregrine falcon (<i>Falco peregrinus</i>)		CFP	Nests are often scrapes on ledges or cliffs, a habit observed in Yosemite Valley. hunt in a wide variety of habitats including meadows, woodlands, marshes, and mudflats.	High. Currently known to occur in Yosemite Valley. Suitable foraging habitat is present.	Yes
long-eared owl (<i>Asio otus</i>)		CSC, BSSC	Found from blue oak savannah up to ponderosa pine and black oak habitats, usually in association with riparian habitats. In Yosemite, they are known to nest in riparian forests and oak-conifer woodlands.	Low. Only three records from Yosemite Valley.	Yes

**Table 3-3
Special Status Wildlife Species in Yosemite Valley (continued)**

Species	Federal ESA ¹	State CESA ²	Habitat Type	Potential Occurrence in Project Area	Selected for Further Analysis
BIRDS (CONTINUED)					
great gray owl (<i>Strix nebulosa</i>)		CE	Require extensive, densely vegetated wet or moist meadows margined by old - growth coniferous forest from the mixed conifer through the red fir to the lower lodgepole pine zones between 750 to 2,700 meters. Breed in conifer stands with large snags and high canopy closure in the immediate vicinity of a montane meadow.	Low to Medium. An estimated 100 - 200 pairs of great gray owls occur in California with a limited geographic distribution centered in Yosemite National Park and adjacent National Forest lands. Only five observations in Yosemite Valley.	Yes
California spotted owl (<i>Strix occidentalis occidentalis</i>)		CSC, BSSC	Areas of mature and old forest with thick canopy that contains many dense, old, live and dead trees and fallen logs. Nest in large, broken - topped conifer snags, particularly red fir, white fir, or in black oak in lower elevations.	Medium. Population density in Yosemite is higher than elsewhere in the Sierra Nevada. However, sightings have been sporadic in Yosemite Valley.	Yes
Vaux's swift (<i>Chaetura vauxi</i>)		CSC, BSSC	Older trees and hollow snags for nesting and roosting habitat.	Low. Habitat requirements include large-diameter trees in old growth areas.	Yes
black swift (<i>Cyseloides niger</i>)		CSC, BSSC	In Yosemite, nest near or behind waterfalls.	Low. Project area does not contain habitat, however there are known populations in Yosemite Valley.	Yes
olive-sided flycatcher (<i>Contopus cooperi</i>)		CSC, BSSC	Forage in unobstructed canopies with high perches.	Medium. Observed in Yosemite Valley and is a fairly common summer resident in the park.	Yes
willow flycatcher (<i>Empidonax trailii</i>)		CE	Frequent the willows found along languid streams and, to a lesser degree, within moist meadows. Deciduous trees and shrubs interspersed with open areas enhance the quality of foraging habitat.	Low. Once commonly observed in Yosemite Valley, last record in Yosemite Valley was in 1974.	Yes
yellow warbler (<i>Dendroica petechia</i>)		CSC, BSSC	Breed primarily in riparian woodlands, up to 2,400 m in the Sierra Nevada. Other breeding habitat includes montane chaparral, ponderosa pine, and mixed conifer where substantial amounts of brush occur.	High. Recent confirmed observations in Yosemite Valley, including confirmed breeding.	Yes
MAMMALS					
pallid bat (<i>Antrozous pallidus</i>)		CSC	Low to mid elevations, versatile in selection of roosting sites, including rock crevices, caves, and anthropogenic structures.	High. Recorded roosting at The Ahwahnee hotel.	Yes
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)		CSC	Low to mid elevations, concentrated in areas with mines or caves. Forage at edge habitats along streams, adjacent to or within wooded areas.	High. Suitable foraging habitat is present or adjacent to the project area.	Yes
spotted bat (<i>Euderma maculatum</i>)		CSC	Roost in crevices in high cliff faces. Forages over meadows, along forest edges, or in open coniferous woodland.	High. Suitable foraging habitat is present or adjacent to the project area.	Yes

**Table 3-3
Special Status Wildlife Species in Yosemite Valley (continued)**

Species	Federal ESA ¹	State CESA ²	Habitat Type	Potential Occurrence in Project Area	Selected for Further Analysis
MAMMALS (CONTINUED)					
Western red bat (<i>Lasiurus blossevillei</i>)		CSC	Roost on the underside of overhanging leaves. Forage at canopy height or low over the ground.	Medium. Suitable foraging habitat is present or adjacent to the project area.	Yes
Western mastiff bat (<i>Eumops perotis</i>)		CSC	Presence is determined by the availability of significant rock features offering suitable roosting habitat. Foraging habitats include Dry desert washes, floodplains, chaparral, oak woodland, open ponderosa pine forest, grassland, agricultural areas, and high elevation meadows surrounded by mixed conifer forests.	High. Yosemite Valley has the highest population of the greater western mastiff bat of any locality surveyed in California.	Yes
Sierra Nevada mountain beaver (<i>Aplodontia rufa californica</i>)		CSC	Well-vegetated, moist, cool environments. Require abundant riparian plants for harvesting and large amounts of small diameter woody debris or uprooted stumps.	Not likely. No confirmed observations in the Merced River corridor.	Dismissed
Sierra Nevada red fox (<i>Vulpes vulpes necator</i>)		CT	High elevation barren, conifer and shrub habitats, montane meadows, talus slopes, subalpine woodlands, and fell-fields. Possible den sites include natural cavities in talus slopes or rockslides, earthen dens, boulder piles, or even the space beneath vacant cabins.	Not likely. No confirmed observations in Yosemite Valley (but several unconfirmed sightings in or near Yosemite Valley since 1977).	Dismissed
Pacific fisher (<i>Martes pennanti</i>)	FC		Generally found in stands with high canopy closure, large trees and snags, large woody debris, large hardwoods, and multiple canopy layers. Avoid entering open areas that have no overstory or shrub cover.	Not likely. Believed to have limited potential for occurrence in Yosemite Valley. Habitat is present in the Valley; however, no recent records support their occurrence.	Dismissed

Footnotes:

¹ ESA = Endangered Species Act administered by the U.S. Fish and Wildlife Service.² CESA = California Endangered Species Act administered by the California Department of Fish and Game.

FT = Federal Threatened

FC = Federal Candidate

CE = California Endangered

CT = California Threatened

CFP = California Fully Protected Species

CSC = California Species of Concern

BSSC = California Bird Species of Special Concern

Source: Yosemite National Park Resources Management and Science Division, May 2011

Special Status Wildlife Species Selected for Further Analysis

Bird Species

Harlequin duck (*Histrionicus histrionicus*)

As of 2011, there are 43 records of harlequin ducks in Yosemite's Wildlife Observation Database. Of these records, 39 observations are from the Merced River corridor. From 1977 to 1985, harlequins were observed with some regularity in the Merced River. After a 15-year absence, harlequins were documented repeatedly in the Merced River between 2000-2007 (NPS 2011b). Harlequin ducks have disappeared from most of their historic breeding range in the Sierra Nevada (Beedy 2008), possibly due to hunting pressure from fishermen early in the 20th century

(Grinnell 1918, Brown 1998). In the Merced River corridor, harlequin ducks are susceptible to disturbance by hikers, rafters, and fisherman at suitable nesting sites. Such disturbances may discourage harlequin ducks from re-colonizing previously used streams and can reduce nesting success where breeding does occur (Beedy 2008).

Northern goshawk (Accipiter gentilis)

Northern goshawk observations have been recorded on 160 occasions in Yosemite National Park. Of these records, 54 observations were in the Merced River corridor, the majority were from Yosemite Valley. The greatest threats to northern goshawk populations are habitat loss and degradation due to the alteration of forests through timber harvest and changes in fire regimes (Keane 1999). Although timber harvest is not a concern within the park, changes in fire frequency could impact on park populations (Steel et al. 2011).

Northern harrier (Circus cyaneus)

Northern harriers observations have been recorded on 47 occasions in Yosemite National Park. Of these observations, 19 records are from the Merced River corridor (NPS 2011b). The majority of the records are from meadows in Yosemite Valley during the fall. Beginning in 1977, there are records of several northern harriers per decade in Yosemite Valley through 2006 (NPS 2011b). Meadow loss through conifer encroachment could reduce northern harrier habitat in Yosemite. Human disturbance and recreation activities near nest sites have also been linked to harrier decline (Burridge 1995, Unitt 2004).

Golden eagle (Aquila chrysaetos)

Golden eagle observations have been recorded on 273 occasions in Yosemite National Park. Of these observations, there are 74 records from the Merced River corridor. The majority of these observations are from locations in Yosemite Valley. The greatest outside threat to golden eagle populations stems from interactions with humans and human-built structures (Steel et al. 2011). In particular, collisions with structures and electrocution by power lines cause the majority of non-natural golden eagle deaths (Steel et al. 2011). Such interactions could have detrimental effects to golden eagle populations in Yosemite. Overall, the relatively intact habitats in Yosemite are beneficial to golden eagles.

Bald eagle (Haliaeetus leucocephalus)

Bald eagle observations have been recorded on 123 occasions in Yosemite National Park. Of those observations, 25 records are from the Merced River corridor (NPS 2011b). Roughly half of the bald eagle observations in the Merced River corridor are from areas downstream of Yosemite Valley. From the late 1970s to 1992 bald eagles were documented in the Merced River corridor at a rate of one every few years. Bald eagles may abandon territories in cases of recreational development or human disturbance near nests (Thelander 1973). Also of concern is mortality due to interactions with vehicles and human infrastructure (Steel et al. 2011).

Peregrine falcon (Falco peregrinus)

Peregrine falcon observations have been recorded on 118 occasions in Yosemite National Park. Of those observations, 65 records are from the Merced River corridor (NPS 2011b). By the early 1970s, peregrine falcons had all but disappeared in Yosemite National Park.

In 1978, nesting peregrine falcons were found in Yosemite Valley, the first time they had been recorded in the park for over 35 years. Since 1978, peregrine falcons have continued to recover in the park. Breeding surveys conducted in 2010 revealed eight active nests in Yosemite, the most

ever documented in one season. Primary threats to peregrine falcons include predation on young by golden eagles and great horned owls and competition with ravens for nest sites. Other threats include disturbances posed by helicopters during search and rescue flights or medical evacuations and conflicts between nesting falcons and rock climbers.

Long-eared owl (Asio otus)

The long-eared owl has been recorded on 22 different occasions in Yosemite National Park, of which only three records are from Yosemite Valley (NPS 2011b). Long-eared owls are only known to have nested in Yosemite Valley on one occasion, in 1915. Two records in Yosemite Valley from 1987 are from the same date and general location (Yosemite School and Leidig Meadow). During one year of meadow surveys for great gray owls, long-eared owls were detected at five out of 15 meadows (Keane et al. 2011); none of these meadows were within the Merced River corridor. Known factors in the decline of long-eared owls in California are destruction and fragmentation of riparian woodlands, live oak habitats, and isolated tree groves, but other factors may also be present.

Great gray owl (Strix nebulosa)

Great gray owl observations have been recorded on 204 occasions in Yosemite National Park. Of these observations, 21 records are from the Merced River corridor. Five of these observations were in Yosemite Valley (NPS 2011b). Human development and activities, including noise and light, and automobile traffic, may impact great gray owl presence, foraging success, and reproductive success both inside and outside Yosemite (Wildman 1992, Maurer 1999). Twenty-six cases of great gray owl mortality due to collisions with vehicles along major highways in the Yosemite region were documented between 1955-2005 (Maurer 2006, J. Maurer, S. Stock, unpubl. data). Disturbance to great gray owls from recreational activities has also been identified as a potential negative factor (Wildman 1992).

California spotted owl (Strix occidentalis occidentalis)

California spotted owl observations have been recorded on 72 occasions in Yosemite National Park. Of these observations, 14 records are from the Merced River corridor. Sightings of California spotted owls are sporadic in Yosemite Valley. The California spotted owl is primarily threatened by habitat loss and fragmentation. Alterations of the natural fire regime in Yosemite and elsewhere have led to frequent stand replacing wildfires that destroy or reduce the quality of California spotted owl habitat (Weatherspoon et al. 1992).

Vaux's swift (Chaetura vauxi)

Vaux's swift observations have been recorded on 24 different occasions in Yosemite National Park. Of these observations, five records are from the Merced River corridor (NPS 2011b). According to Breeding Bird Survey data from the Sierra Nevada, Vaux's swift is significantly and rapidly declining in the Sierra Nevada region (Sauer et al. 2008). Loss of roosting trees is the single greatest threat to Vaux's swifts (Shuford and Gardali 2008).

Black swift (Cyseloides niger)

Black swifts have been observed on 32 occasions in Yosemite National Park. The vast majority of black swift observations in the park are in or near the main stem of the Merced River (NPS 2011b). Grinnell and Miller (1944) indicate Yosemite Valley and other locations in Mariposa County as nesting sites. Bridalveil Fall is suspected to be one of only three sites in California

where nesting populations of black swifts exceed 10 pairs (Roberson and Collins 2008). Habitat for black swifts within Yosemite is largely intact and protected as designated wilderness.

Olive-sided flycatcher (Contopus cooperi)

Olive-sided flycatcher observations have been recorded on 81 occasions in Yosemite National Park. Of these observations, 15 records are from the Merced River corridor, including several observations in Yosemite Valley in the 1920s and 1970s. The most significant threat to the olive-sided flycatcher is habitat degradation and loss on both breeding and wintering grounds (Widdowson 2008). In the southern Sierra Nevada, where habitat remains essentially unchanged, declines probably have resulted from destruction of forests on wintering grounds in Central America (Marshall 1988).

Willow flycatcher (Empidonax trailii)

Once a commonly-observed bird in Yosemite Valley, willow flycatchers are now exceedingly rare in Yosemite National Park as a whole. Gaines (1992) indicates that they had stopped breeding in Yosemite Valley by 1966. One observation from 1974 in Yosemite Valley is the most recent sightings of willow flycatchers in the Valley, though they are still seen on rare occasions elsewhere in the park. Within the Sierra Nevada, habitat degradation due to historic and/or ongoing grazing of riparian and meadow habitats appears to be associated with population declines (Siegel et al. 2008). Willow flycatcher are particularly vulnerable to brood parasitism by brown-headed cowbirds (*Molothrus ater*), which are frequently observed in Yosemite taking advantage of unnatural food sources at pack stations, stables, campgrounds, and in park residential areas.

Yellow warbler (Dendroica petechia)

In 2010, bird surveys detected 49 individual yellow warblers in Yosemite Valley and confirmed breeding based on two specific observations: (1) an adult carrying food for young and (2) recently fledged young. Human population growth and resulting habitat degradation threaten yellow warbler populations given their sensitivity to decreases in deciduous habitat, riparian habitat heterogeneity, and riparian corridor width (Saab 1999). In Yosemite, the Monitoring Avian Productivity and Survivorship Program documented a significant decline in yellow warbler captures between 1993 and 2006 (Siegel et al. 2006).

Bat Species

Special status bat species that have the potential to occur within the project area are pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), spotted bat (*Euderma maculatum*), Western red bat (*Lasiurus blossevillei*), and the greater Western mastiff bat (*Eumops perotis californicus*). The majority of these bat species are somewhat specialized in their habitat requirements, preferring large trees, hollow trees, dense foliage, meadows, or snags for roosting or foraging habitat. There is suitable habitat for all 5 bat species in the project area.

A bat survey in July 1993 (Pierson and Rainey 1993) identified several pallid bat roost sites under the overhanging eaves on the east and west sides of the hotel. Night roosting sites for pallid bats were seen at "various sites around the periphery of the hotel," and at the second story balcony on the south side of the hotel.

In 2002 bats were informally identified roosting at The Ahwahnee as evidenced by guano stains on the building. Specialists were hired to exclude bats from one area of the building, and building modifications were made to prevent further roosting. In 2009, more guano was observed at The Ahwahnee on the 5th and 6th floor balconies. Specialists determined that bats were using the

building for “rests” during night time foraging but no evidence suggested a bat colony was roosting in that location (WBS 2009).

In 2010 acoustic surveys for special status bat species were performed at two locations in Yosemite Valley, at Yosemite Creek and at North Pines Campground. None of the 5 special status bat species listed above were detected in the 2010 Yosemite Valley survey (NPS 2011a).

Environmental Consequences – Methodology

Federal agencies must consult with the U.S. Fish and Wildlife Service to ensure their actions would not jeopardize the continued existence of any federally listed or proposed threatened or endangered species, or adversely modify designated or proposed critical habitat (Endangered Species Act section 7 (a) (2)). If listed species or critical habitat are present, the federal agency must determine if the action could affect those species or their habitat.

The National Park Service makes the determination of effect for the alternatives following guidance outlined in the 1998 U.S. Fish and Wildlife Service and National Marine Fisheries Service *Endangered Species Act Consultation Handbook: Procedures for Conducting Section 7 Consultations and Conference Activities*. Although special status species include state listed and sensitive species, park sensitive species, and species with other federal (i.e., Bureau of Land Management or Forest Service sensitive), state, or local special status, in addition to species protected under the Endangered Species Act, impacts are determined following the same guidance. Potential effect determinations are as follows:

- **No Effect:** The project (or action) is located outside suitable habitat and there would be no disturbance or other direct, indirect, or cumulative impacts on the species. The action would not affect the listed species or its designated critical habitat (USFWS 1998).
- **May Affect, Not Likely to Adversely Affect:** The project (or action) occurs in suitable habitat or results in indirect impacts on the species, but the effect on the species is likely to be entirely beneficial, discountable, or insignificant. The action may pose effects on listed species or designated critical habitat but given circumstances or mitigation conditions, the effects may be discounted, insignificant, or completely beneficial. Insignificant effects would not result in take. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not (1) be able to meaningfully measure, detect, or evaluate insignificant effects or (2) expect discountable effects to occur (USFWS 1998).
- **May Adversely Affect:** The project (or action) would have an adverse effect on a listed species as a direct, indirect, or cumulative result of the proposed action or its interrelated or interdependent actions and the effect is not discountable, insignificant, or beneficial (USFWS 1998).

The impact evaluation for special status wildlife species was based on the following: (1) the known or likely occurrence of a species or its preferred habitat in the vicinity of the project area; (2) the direct physical loss or gain, or modification of habitat; (3) the effective loss of habitat (through avoidance or abandonment) due to construction activity or noise, or the species’ sensitivity to human disturbance.

As noted in the affected environment section above, there are no special status plants evaluated for this project.

Environmental Consequences of the No Action Alternative

Analysis

Current habitat disturbance from human activities at The Ahwahnee include noise, human presence, vehicle traffic, and artificial light. Under the No Action Alternative, there would be no new impacts on special status wildlife. Current levels of human use and vehicular disturbance would continue. Existing wildlife management activities to protect special status wildlife habitat and populations would continue.

Conclusion: Under the No Action Alternative, there would be no effect on special status wildlife habitat or populations.

Cumulative Impacts

Past projects which contributed to habitat disturbance within the project area include the construction, expansion, and continuous use of facilities in the project area beginning in the late 1800s.

Other recent projects that have impacted special status wildlife within the project area include construction repairs conducted under the *2009 Interim Rockfall Parking Plan*, and the rehabilitation or replacement of braking pads and asphalt roads under the *Yosemite Valley Shuttle Bus Stop Improvements project*. These actions would have resulted in negligible, adverse, impacts on special status wildlife due to short-term disturbance associated with construction, including noise, increased human presence, and use of heavy equipment. The area impacted may include foraging habitat for bird species.

Current or reasonably foreseeable projects that could beneficially impact special status species within the project area include the *Merced Wild and Scenic River Comprehensive Plan*, the *Invasive Plant Management Plan Update* and the *2009 Fire Management Plan*. These plans may have long-term, moderate, beneficial impacts by addressing resource protection and restoration issues, including; development (and/or removal) of facilities, management of user capacities, removal of nonnative vegetation, protection from catastrophic fire, and other specific management measures that may improve habitat quality.

Improvement projects that may adversely impact special status species within the project area include the *Scenic Vista Management Plan* which could include mechanical thinning and trimming of vegetation to restore views, the *East Yosemite Valley Utilities Improvement Plan*, the *Ahwahnee Hotel Improve Porte Cochere Walkways and Fence project*, and the *Ahwahnee Dormitory Foundation Rehabilitation project*, which may result in short-term disturbance associated with construction. These projects would result in negligible, short-term adverse impacts on special status wildlife. Overall, the cumulative actions in combination with the No Action Alternative could result in local, short-term to long-term, negligible adverse impacts and local, long-term, moderate beneficial impacts on special status species.

Environmental Consequences of Alternatives 1, 2, and 3

Analysis

Short-term adverse impacts on wildlife habitat and populations resulting from construction activity would include increased noise, increased human presence, heavy equipment use, and increased vehicle traffic. In addition to ongoing impacts resulting from normal hotel operations and visitor use, the impacts of construction activity would be expected to be minor.

Impacts on bat species, particularly from actions that would involve physical alterations to structures, would be minimized or avoided with the implementation of mitigation measures described in the wildlife section of Appendix E. These measures would include preconstruction surveys and limits on construction activities during critical breeding and nesting times. To avoid adverse impacts on maternal or hibernating bat colonies, construction would occur between the end of August and the end of October. If work must occur outside this time frame, the hotel, cottages, and dormitory would be checked for bat occupancy just prior to construction and the park wildlife biologist would be consulted.

In addition, the vicinity of The Ahwahnee includes foraging habitat for the special status bird and bat species. The impact of project implementation on these species would be from disturbance associated with increased human presence, construction equipment use, and increased vehicle traffic. Construction may occur over several seasons as actions under this plan would be conducted through phased implementation as funding becomes available. Tree removal resulting from improvements to the fire department access road to the cottages would occur outside of the nesting season (after August and before April) in order to avoid impacts on special status bird species.

In addition, implementation of standard wildlife mitigation measures in Appendix E, including presence/absence surveys before and during the breeding season, limiting construction activities to before dusk and after dawn, and standard construction mitigation measures to protect habitat, potential impacts on these species would be minimized or avoided.

Conclusion: The project would occur in suitable habitat for special status bird and bat species. The implementation of mitigation measures in Appendix E with a focus upon avoidance, limiting tree removal, limiting construction activities to outside of breeding seasons, limiting construction activities to daytime hours, conducting detailed surveys immediately before construction, and limiting areas of disturbance, would minimize impacts on these species. Therefore, Alternatives 1, 2, and 3 may affect, but are not likely to adversely affect special status species.

Cumulative Impacts

The list of past projects, current approved actions, or reasonably foreseeable actions that may have a cumulative impact on the project area would be the same as provided under the No Action Alternative. In conjunction with these, Alternatives 1, 2, or 3 may affect, but are not likely to adversely affect special status species.

Air Quality

Affected Environment

Yosemite National Park is classified as a mandatory Class I area under the 1970 Clean Air Act, as amended (42 USC 7401 et seq.). This air quality classification was enacted to protect national parks and wilderness areas from air quality degradation. Class I designation gives federal land managers the responsibility for protecting air quality related values in Class I areas from the adverse effects of new or modified sources of emissions. Vegetation, visibility, water quality, wildlife, historic and prehistoric structures and objects, cultural landscapes, and most other elements of a park environment are sensitive to air pollution and are considered by the National Park Service to be air quality-related values.

The 1970 Clean Air Act also requires the EPA to establish National Ambient Air Quality Standards and periodically reassess whether these standards are adequate to protect public health and the national welfare, including those resources and values associated with national parks and wilderness areas. The EPA has set national standards for six pollutants: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, lead, and particulate matter larger than 2.5 and smaller than 10 microns in diameter (PM-2.5 and PM-10). Under the 1988 California Clean Air Act, the California Air Resources Board (CARB) applied additional standards for air pollution control beyond those established by national standards. In general, the California ambient standards are more stringent, particularly for ozone and PM-10, than federal standards.

The state of California is divided into air basins that are routinely monitored using both federal and state air quality standards. The Ahwahnee Hotel is located in Mariposa County, near the southern end of the Mountain Counties Air Basin. Currently, all of Mariposa County is a *nonattainment* area for the national and state 8-hour ozone standards and is in attainment or *unclassified* (meaning there are insufficient data to make determination) for other federal and state criteria pollutants (EPA 2010; CARB 2010). Activities that affect air quality in Mariposa County are regulated by the Mariposa County Air Pollution Control District, which is responsible for developing a state implementation plan for federal and state nonattainment pollutants.

Current county regulations for maximum discharges of fossil fuel steam generator facilities (new or expanded) are: 200 lbs/hour of sulfur dioxide (SO₂), 140 lbs/hour of nitrogen dioxide (NO₂), and 10 lbs/hour of combustion contaminants (i.e., particulate matter).

Air pollutants can affect both human health and ecosystem health, but human exposure is most aggressively protected by federal and state law. From a human health perspective, air quality throughout Yosemite is generally good, with the exception of: 1) spatially localized nighttime smoke accumulation due to prescribed fires, wildland fires, and camp fires; and 2) regionally high ozone in the front-country during hot stagnant summer days when upslope winds bring ozone precursors (i.e., nitrogen oxides [NO_x] and volatile organic compounds [VOCs]) into the park from urban sources west of the park. Asthmatics, people with cardiovascular problems, the elderly, children, and actively exercising individuals are the most vulnerable to these pollutants.

Less is known about ecological impacts of air pollutants in Yosemite, but damage to Jeffrey pine (*Pinus jeffreyi*), generally at elevations below 6,000 to 7,000 feet on the western slopes of the park, has been well documented for several decades.

Environmental Consequences – Methodology

A qualitative analysis of air quality was used to describe air emission impacts associated with demolition and removal activities. Pollutants resulting from the implementation of an alternative can impact air quality; however, air quality is a regional issue that is influenced by factors outside the immediate project area. This project is not expected to increase the number of non-construction vehicles in the project area. Therefore, non-construction vehicular emissions are not addressed in this analysis.

Context: For the purposes of this analysis, local impacts would be those that occur within Yosemite National Park, and in particular Yosemite Valley. Regional impacts would be those related to the Mountain Counties Air Basin.

Duration: A short-term impact would be temporary in duration and would be associated with construction activity. A long-term impact would have an impact that would be detected after project implementation, such as changes in overall emissions from the project area.

Intensity: A negligible impact would have no measurable effect, a minor impact would have a slightly measurable effect, moderate impacts would be clearly detectable and appreciable effects, and major impacts would have highly measurable and substantial effects on existing air quality conditions. Both moderate and major impacts would be particularly measurable and noticeable to sensitive receptors.

Type: Beneficial air quality impacts would reduce emissions or lower air pollutant concentrations, while adverse impacts would increase emissions or raise pollutant concentrations.

Environmental Consequences of the No Action Alternative

Analysis

Short-term impacts

There would be no construction-related impacts on air quality under this alternative.

Long-term impacts

The heating system at the hotel was upgraded in 1990, but has since exceeded its design life and is deteriorating. Estimates based upon the age of the heating system predict that the unit continues to meet current county emissions codes, although precise measurements would be required to confirm this.

A chilled water system air conditioning unit was added to the hotel in 1990 to provide cooling to guestrooms, the Dining Room, the Sweet Shop, and the Gift Shop. The cooling system uses a HCFC (hydrochlorofluorocarbon) refrigerant that is scheduled to be phased out by 2020.

Conclusion: Under the No Action Alternative, there would be no new short-term or long-term impacts on air quality. Existing equipment would remain in place and regular maintenance activities would continue.

Cumulative Impacts

Short-term adverse impacts on air quality could result from construction activities associated with some of the current and reasonably foreseeable actions planned or approved within the park. Particulate matter conditions in Yosemite Valley would be determined by both regional sources and local sources and could be beneficial or adverse.

Past actions in the project vicinity that may have impacted air quality include the *Yosemite Valley Shuttle Stop Improvements*, which may have included short-term, adverse impacts from construction activities and asphalt paving.

Current or reasonably foreseeable actions that may impact air quality in the project area include: the planned *Parkwide Rehabilitation of Concessioner Operated Fireplaces*, the *Merced Wild and Scenic River Comprehensive Management Plan*, the *East Yosemite Valley Utilities Improvement Plan*, the *2009 Fire Management Plan*, and the *Ahwahnee Dormitory Foundation Rehabilitation Project*. Adverse impacts of construction activities associated with the seismic upgrades at the dormitory and utility upgrades would be localized and short-term in nature. Wildland and prescribed fires in the park, managed in accordance with the *2009 Fire Management Plan*, could adversely impact local and regional air quality in the short-term.

Long-term beneficial impacts on air quality would result from the rehabilitation of concessioner-operated fireplaces (from a reduction in particulate emissions) and the implementation of the

Merced Wild and Scenic River Comprehensive Management Plan, which would include measures to guide the future protection and restoration of natural resources in the Valley.

In conjunction with adverse impacts associated with regional air quality influences, the No Action Alternative, in combination with cumulative projects would result in long-term, minor, beneficial impacts on local and regional air quality. The local, short-term, adverse effects associated with construction activities would not offset the long-term beneficial impacts of cumulative projects.

Environmental Consequences of Alternatives 1, 2, and 3

Proposed actions that may impact air quality are generally the same for all action alternatives, with only minor exceptions. Therefore, the action alternatives are analyzed together.

Analysis

Short-term impacts. Air quality effects associated with construction activities would include temporary engine and dust emissions from a variety of sources. These activities could generate substantial amounts of dust, including PM-10. Dust emissions would vary from day to day, depending on the level and type of activity and weather conditions. Emissions generated from construction activities would also include tailpipe emissions from heavy-duty equipment, worker commute trips, and truck trips to haul construction equipment and materials to and from the site. Both mobile and stationary equipment would generate emissions of ozone precursors, carbon monoxide, PM-2.5 (all criteria air pollutants) and toxic air contaminants from use of diesel-powered equipment. Toxic air contaminants are less pervasive in the atmosphere than criteria air pollutants, but they are linked to short-term (acute) and long-term (chronic or carcinogenic) adverse human health effects. Toxic air contaminants do not have corresponding ambient air quality standards.

Construction activities would occur at times when recreational users would be present in the area. Depending on the availability of funding, implementation of any of the action alternatives would be expected to require several seasons of construction. The construction period could extend year-round; however, limiting the construction activities to periods of lower use (winter and early spring) would limit the exposure of sensitive receptors, such as children and the elderly, to tailpipe emissions and diesel particulates.

Long-term impacts. Under all action alternatives, the replacement of heating and cooling equipment with high-efficiency equipment that uses a non-HCFC refrigerant would be a beneficial impact on air quality. Improvements would be made to the ventilation systems throughout the hotel and cottages. New boilers would require county permits, and would not exceed the current regulations for emissions. Where feasible, new finish materials would include low VOC-content materials, which would improve the indoor air quality of the facility.

Overall emissions from hotel operations equipment are expected to be lower than existing conditions. If the diesel-fired boilers were replaced with propane-fired boilers, as proposed under Alternative 2, expected emissions may be lowered further. However, the lower BTU value of propane may require additional fuel and more frequent trips by tanker trucks to fill onsite tanks.

Conclusion: Implementation of Alternatives 1, 2, or 3 would result in short-term, minor, adverse impacts on local air quality due to construction-related dust, equipment and vehicle emissions. Efficiency upgrades throughout the hotel and cottages for equipment and materials would result in a long-term, minor, beneficial impact on indoor, local, and regional air quality.

Cumulative Impacts

Short-term adverse impacts on air quality could result from construction activities associated with some of the current and reasonably foreseeable actions planned or approved within the park. With respect to particulate matter, conditions in Yosemite Valley would be determined by both regional sources and local sources and could be beneficial or adverse.

Past actions in the project vicinity that may have impacted air quality include the *Yosemite Valley Shuttle Stop Improvements*, which may have included short-term adverse impacts from construction activities and asphalt paving.

Current or reasonably foreseeable actions that may impact air quality in the project area include: population growth, the planned *Parkwide Rehabilitation of Concessioner Operated Fireplaces*, the *Merced Wild and Scenic River Comprehensive Management Plan*, the *East Yosemite Valley Utilities Improvement Plan*, the *2009 Fire Management Plan*, and the *Ahwahnee Dormitory Foundation Rehabilitation Project*. Adverse effects of construction activities associated with the seismic upgrades at the dormitory and utility upgrades would be localized and short-term in nature. Wildland and prescribed fires in the park, managed in accordance with the *2009 Fire Management Plan*, could adversely impact local and regional air quality in the short-term.

Long-term beneficial impacts on air quality would result from the rehabilitation of concessioner-operated fireplaces (from a reduction in particulate emissions) and the implementation of the *Merced Wild and Scenic River Comprehensive Management Plan*, which would include measures to guide the future protection and restoration of natural resources in the Valley.

Although cumulative growth in the region would tend to adversely affect air quality, implementation of ongoing state and federal mobile-source control programs would ameliorate this effect to a degree. In conjunction with adverse impacts associated with regional air quality influences, Alternatives 1, 2, and 3, in combination with cumulative projects would result in long-term, minor, beneficial impacts on local and regional air quality. The local, short-term, adverse effects associated with construction activities would not offset the long-term beneficial impacts of cumulative projects.

Soundscapes

Affected Environment

A soundscape refers to the total acoustic environment of an area. Both ambient and human generated sounds may be desirable and appropriate in a soundscape. By definition, “noise” is human-caused sound that is considered unpleasant and unwanted. Whether a sound is considered unpleasant depends on the individual listening to the sound and what the individual is doing when the sound is heard (e.g., working, playing, resting, or sleeping).

Protecting natural sounds is important both to the visitor experience and the ecological integrity of natural resources in Yosemite National Park. National parks provide visitors refuge from noise, where they can instead become attuned to the historic and natural character of the area. Natural soundscapes are also important to wildlife: birds use sound to define territories, attract mates, and even navigate dense forest canopies, while other animal species use sound to keep track of offspring, predators, and prey.

National Park Service Standards and Regulations

NPS *Management Policies 2006* directs parks to “preserve, to the greatest extent possible, the natural soundscapes of parks.” This includes restoring soundscapes to natural conditions if they have become degraded by unnatural sound (noise) and protecting natural soundscapes from unacceptable impacts. It is up to park managers to decide what constitutes acceptable impacts on natural soundscapes, recognizing that “frequencies, magnitudes, and durations of acceptable levels of unnatural sound will vary throughout a park, being generally greater in developed areas” (NPS 2006a).

The current interpretation of these soundscape policies is that the National Park Service must protect natural sound environments, but also address what might be appropriate levels of human-generated sound in light of why a park was established. For instance, some human sounds may be entirely appropriate for the purposes of interpretation and increased understanding of park resources. Examples include interpretive talks or American Indian traditional cultural use (NPS 2010e).

Existing Sources of Sound

Natural sounds at The Ahwahnee result from sources such as birds, animals, the rush of water in creeks, the Merced River, waterfalls (particularly in spring and early summer), and wind in the trees. The frequency and intensity of human-caused sound in the project area varies with the season, and generally includes human voices, such as talking and yelling. Background noises include mechanical sources such as motor vehicles, transit buses, maintenance equipment, mechanical devices associated with building operations and grounds maintenance, and aircraft flying overhead. Motor vehicle and aircraft noise are present year-round.

Environmental Consequences – Methodology

The soundscapes impact assessment involves the identification and qualitative description of the types, characteristics, and sources of actions proposed under each alternative that could affect the ambient acoustic environment. For most sound sources, such characteristics would include the location and movement of the source, its operational features that produce sound, and how the sound would be distributed over time. The analysis of impacts on soundscapes is qualitative, with professional judgment applied to reach reasonable conclusions as to the context, duration, type, and intensity of impact, as discussed below.

Sound and noise levels are measured in units known as decibels (dB). For the purpose of this analysis, sound and noise levels are expressed in decibels on the “A” weighted scale (dBA). This scale most closely approximates the response characteristics of the human ear to low-level sound. Human hearing ranges from the threshold of hearing (0 dBA) to the threshold of pain (140 dBA). As a point of reference, a conversation between two people would typically measure about 60 dBA. A noise level above 80 dBA can cause hearing loss if prolonged.

Context: The impact would be detectable only within the vicinity of the proposed action. Thus, the setting or area within which impacts are analyzed would be local.

Duration: The duration of the impact considers whether the impact would occur in the short-term or the long-term. A short-term impact would be temporary in duration or transitory in effect, such as construction noise or noise from passing vehicles. A long-term impact would have a permanent impact on the ambient environment.

Intensity: A negligible impact indicates the change in sound levels would not be perceptible. A minor impact indicates the change in sound levels would be perceptible, but not likely to have a substantial annoyance effect on visitors or residents in the area. A moderate impact indicates the change in sound levels would be easily perceptible and likely to result in annoyance to some park visitors and residents. A major impact indicates the change in sound levels would be very perceptible and likely to annoy most park visitors and residents who experience it.

Type: Adverse impacts are those impacts that result in more noise and beneficial impacts are those impacts that result in less noise.

Environmental Consequences of the No Action Alternative

Analysis

Noise generated by activities associated with regular operations at The Ahwahnee would continue to affect ambient sound in the vicinity of the project area. These noises include human voices primarily associated with overnight guests and visitors at The Ahwahnee hotel and grounds, as well as vehicle noise and noise from building operations and grounds maintenance. There would be greater amounts of noise affecting the project area in summer, when visitation to Yosemite Valley is at its highest, guest accommodations at The Ahwahnee are typically full, and the hotel is fully staffed.

Conclusion: Under the No Action Alternative, the project area would continue to be impacted by noise generated by regular operations and visitor use at The Ahwahnee. The No Action Alternative would result in no new impacts on soundscapes.

Cumulative Impacts

Short-term, adverse impacts on soundscapes could result from construction activities associated with some of the current and reasonably foreseeable actions planned or approved within the park. Nearby work that could contribute to noise includes work associated with the *East Yosemite Valley Utilities Improvement Plan*, the *Ahwahnee Dormitory Foundation Rehabilitation Project*, and potential future actions associated with the *Merced Wild and Scenic River Comprehensive Management Plan*. Vegetation management in accordance with the *Invasive Plant Management Plan*, the *Scenic Vista Management Plan*, and the *2009 Fire Management Plan* could adversely impact the ambient noise environment. The adverse impacts of these activities would be localized and short-term in nature. In conjunction with the No Action Alternative, these projects would have a local, short-term, minor, adverse impact on soundscapes.

Past projects at and in the vicinity of The Ahwahnee would not have a cumulative impact project alternatives, because their impacts on soundscapes were temporary in nature and have ended.

Environmental Consequences of Alternatives 1, 2, and 3

Proposed actions that may impact soundscapes are generally the same for all action alternatives, with only minor exceptions. Therefore, the action alternatives are analyzed together.

Analysis

Impacts on soundscapes under all action alternatives would be limited to short-term impacts from construction activities. Because the proposed actions would not result in changes to levels of visitation at the park, a substantial change in the number of accommodations, employee staffing,

or changes to the basic operations of the hotel, there would be no long-term impact on soundscapes resulting from implementation of any of the action alternatives.

Depending on funding availability, construction periods could last for several seasons. The type of noise generated during each construction period would include the operation of heavy equipment, voices of workers, handheld manual and power tools (e.g., hammers, drills, and saws), noise associated with material haul vehicles, and noise associated with equipment used for excavation. Typical noise levels for equipment likely to be used during construction activities would range from 74 to 89 dBA at a distance of 50 feet. These noise levels are expected to be substantially higher than the existing ambient noise at The Ahwahnee, with some equipment potentially doubling the noise levels.

Heavy equipment use during excavation activities could generate substantial amounts of noise that would affect wildlife, onsite staff, guests, and nearby recreational users, particularly if construction takes place while The Ahwahnee is occupied and open for day use. Noise impacts outside of the hotel would vary depending upon a number of factors including the number and types of equipment in operation on a given day, usage rates, the level of background noise in the area, and the distance between receptors and construction activities. Disturbance of visitors and employees could be mitigated to some degree by scheduling high activity during periods of low use (e.g., late fall or late winter) and restricting construction hours to daytime periods when guests are least likely to be sleeping. In addition, scheduling construction activities outside of breeding seasons would reduce potential impacts on wildlife species (see Appendix E: Mitigation Measures).

Conclusion: Alternatives 1, 2, and 3 would result in short-term elevated levels of noise in the project area due to construction activities. This would potentially affect guests, onsite staff, and nearby recreational users; however, the number of people impacted would be lower if construction was scheduled during periods of low occupancy, low visitation, or during a hotel closure. In addition, wildlife may be impacted by noise generated during construction. Impacts on wildlife would be mitigated by scheduling construction activities outside of breeding seasons. Overall, Alternatives 1, 2, and 3 would result in a local, short-term, moderate, adverse impact on soundscapes.

Cumulative Impacts

Short-term, adverse impacts on soundscapes could result from construction activities associated with some of the current and reasonably foreseeable actions planned or approved within the park. Nearby work that could contribute to noise includes work associated with the *East Yosemite Valley Utilities Improvement Plan*, the *Ahwahnee Dormitory Foundation Rehabilitation Project*, and potential future actions associated with the *Merced Wild and Scenic River Comprehensive Management Plan*. Vegetation management in accordance with the *Invasive Plant Management Plan*, the *Scenic Vista Management Plan*, and the *2009 Fire Management Plan* could adversely impact the ambient noise environment. The adverse impacts of these activities would be localized and short-term in nature. In conjunction with Alternatives 1, 2, or 3, these projects would have a local, short-term, moderate, adverse impact on soundscapes.

Past projects at and in the vicinity of The Ahwahnee would not have a cumulative impact project alternatives, because their impacts on soundscapes were temporary in nature and have ended.

Sociocultural Resources

Visitor Experience and Services

Affected Environment

National Park Service stewardship of a National Historic Landmark requires the consideration of two integrated purposes: (1) preserving a unique cultural resource and (2) continuing to make this resource available to visitors for the benefit and enjoyment of present and future generations.

Overnight Accommodations at The Ahwahnee Hotel

The Ahwahnee hotel includes 99 guestrooms at varying levels of amenities. Each guestroom is accented with original designs; guests are assigned traditional keys for room access. Throughout the upper floors of the hotel there are 12 “featured” suites, most with private balconies; these rooms include the Presidential Suite, the Third Floor Suite, the El Dorado Diggins Suite, the Mary Curry Tresidder Suite, the Underwood/Tressider Suite, and a Sunroom Suite. There are also 12 “classic” rooms located throughout the hotel. These rooms include slightly fewer amenities than the suites, but are still finely furnished and decorated and include sweeping views of the hotel grounds and spectacular scenery. There are 75 “standard” rooms with views of Half Dome, Yosemite Falls, or Glacier Point. Four rooms include a sitting room (parlor) that adjoins the hotel room. Each of these Ahwahnee parlors has its own unique décor.

The Ahwahnee cottages offer 24 rooms available to overnight guests. The buildings are single-story, wood-framed structures located on the southeastern edge of the hotel grounds. The cottages are accessible by pathways providing a connection to the hotel. Pedestrian paths include both asphalt paths and unpaved paths. The main asphalt path provides access to the cottages; there are two “spine” paths that link to individual cottages; and smaller asphalt paths connect to the cottage terraces.

Day Use Opportunities at The Ahwahnee Hotel

The Ahwahnee hotel was originally designed to attract overnight guests. However, today many visitors to Yosemite National Park make The Ahwahnee hotel a day use destination. Much of the hotel is open to the public, including the main floor lounges and Solarium. The expansive public rooms have outstanding displays of artwork, stencils, murals, tapestries and rugs, furniture, and fixtures for visitors to enjoy.

Upon arriving at the hotel, visitors and guests pass through the protected Porte Cochere and along an open, timber-framed entry gallery to the Registration Lobby. Guests arriving by bus are dropped off outside the Porte Cochere because modern buses are too tall to fit under the structure. Passenger luggage is unloaded and buses back out of the dropoff area and continue elsewhere to find parking. There are six accessible parking spaces set aside for guests visiting the hotel. The ADA-ABA spaces are located near the Porte Cochere, east of the reflecting pond (Figure 2-1).

Entering the building, the Registration Lobby provides comfortable seating areas. The Registration Lobby is typically very busy, with a steady stream of guests and visitors flowing through the area or registering for rooms. The Ahwahnee Bar is located off of the Registration

Lobby to the east, and provides a relaxed setting for drinks or a light meal. There are two retail stores located off the lobby, the Sweet Shop and the Gift Shop.

The Elevator Lobby is at the center of the first floor and is therefore the primary circulation space. The main area is rectangular with two hallways extending to the Great Lounge and a hallway connecting to the Dining Room. A large fireplace is centered on the south wall; a seating area is located in the center of the lobby. Stencils, textiles, and artwork add composure to the ambiance of this busy area.

Off of the Elevator Lobby, the Great Lounge is the largest space in the South Wing. This room is vast, with proportions of 80 feet long by 50 feet wide and 30 feet tall. Everything in the room is oversized; huge iron chandeliers hang from the ceilings, and several enormous tables and large pieces of furniture anchor the space. The floor is wood and partially covered by rugs. A large stone fireplace is centered on the north side of the room. Comfortable, well-lit seating areas are located throughout the room for visitors and guests to relax and enjoy views out the near full height windows. The windows are topped with original, hand-stained glass panels. The ceiling beams are covered with decorative stenciling, which add to the warmth and comfortable ambiance of the room. Multiple sets of large, multipane double doors swinging to outside patios are on either side of the Great Lounge.

The Under Lounge (or South Lounge) is the single-story area at the south end of the Great Lounge that is dominated by a large stone fireplace on its south wall. The Winter Club Room, Mural Room, and Solarium are located off of this area on the ground floor. The Winter Club Room is a comfortable sitting room with floor to ceiling display cases, a winter sports theme, vintage photographs, and large windows. The Mural Room has a spectacular mural of Yosemite's flora and fauna on the north wall. A copper-hooded fireplace and French doors looking out on the landscaped grounds make it a quiet place to read, write, or entertain a small group. The Solarium offers natural light from windows on three sides and a view of Glacier Point. Access to the wedding lawn from this area is by an uneven flagstone and unpaved path.

The Dining Room is off of the Elevator Lobby on the ground floor. This cavernous room is two stories high with open-sloped ceilings exposing the log wood truss structure. Each end of the room is supported by four large granite-faced columns. Another pair of columns supports the roof of the alcove off the west end of the Dining Room. The south wall is filled with large picture windows with doors on either side of each window. Walls and ceiling have decorative stencils. The concrete floor is stained in an elaborate pattern with red, green, tan, and brown stains. The Dining Room offers service for breakfast, lunch, Sunday brunch, and dinner.

There are three public restrooms available to visitors at The Ahwahnee hotel. The men's room is on the ground floor, the women's room is on the first floor, and a unisex family room is located on the first floor. Fixture counts in the women's restroom include four toilets and four sinks. The men's room has four toilets, three urinals, and three sinks. An accessible toilet compartment is provided in each of the women's and the men's restrooms. A unisex restroom is provided adjacent to the women's restroom.

Fire and Life-Safety

Fire suppression sprinklers, detectors, alarms, smoke curtains, new fire department connections, and secondary egress from the fifth and sixth floors of the hotel were installed in 2010-2011. Even with these upgrades to the sprinkler, detection, and alarm systems, The Ahwahnee hotel and associated buildings are not fully compliant with current fire and life-safety systems codes. In particular, emergency egress from floors above ground level, interior emergency signage, fire wall

separations, open shafts and laundry chutes between floors, expedient firefighter and emergency access to rooms, detectors and alarms at the cottages and dormitory, and fire engine access around the exterior of the building and to the cottages are insufficient.

At the second floor of the East Wing, the noncompliant egress stair to the first floor is narrow, steep, and unenclosed, and the exterior stair to ground level has open risers. The third and fourth floors also use this route for egress. This path of egress is not well marked, potentially causing confusion for those exiting the building.

Due to inadequate means of egress, public use of the South Mezzanine meeting rooms was recently revoked in accordance with the recommendation of the Yosemite National Park Fire Marshal. Nonpublic, business-only occupancy of two of the South Mezzanine meeting rooms (Tudor Lounge and Colonial Room) is now limited to 30. All use of the Tresidder Room has been suspended.

There currently are no code-required interior fire separations in the hotel between the Dining Room and Kitchen; between the Dining Room and North Mezzanine and Elevator Lobby; or in the elevator, laundry, and mechanical shafts. Without these separations, smoke and flames could spread between floors and throughout the hotel in the event of a fire.

The current door lock system for guest and supply rooms in the hotel was recently upgraded, but is still not a uniform, integrated system. Supply closets and mechanical rooms are separately keyed. In an emergency, firefighters would have difficulty accessing all rooms in a timely manner to ensure evacuated rooms and access spaces.

Seismic and Structural Stability

Based on a seismic evaluation of The Ahwahnee (Degenkolb Engineers 2010), there are some inherent qualities of the hotel and cottages that might present safety hazards to visitors and employees in the event of a BSE-1 (500-year) or BSE-2 (2,500-year) earthquake (see the ‘Geohazards’ analysis, above). Potential safety hazards would include falling stones from the granite veneer above the entrance to the Dining Room and from stone columns at the west end of the Dining Room, and shattering of the large bay windows in the Dining Room and Solarium. Other hazards to visitor and employee safety in a 500-year event would include chimneys toppling from the main hotel or the cottages, stones detaching from the exterior granite veneer and potentially falling onto egress paths, and failure of the two-story gypsum block walls in the Great Lounge.

Accessibility

As noted above under ‘Fire and Life-Safety,’ the South Mezzanine meeting rooms can only be accessed by a single stairway. Use of the three meeting rooms at the South Mezzanine is limited to nonpublic, business-only occupancy of up to 30 employees in the Tudor Lounge and Colonial Room. Employee access to these meeting rooms does not comply with ADA-ABA requirements.

There are currently three accessible guestrooms in the hotel and two accessible guestrooms at the cottages. These rooms do not have the clearances available in a modern facility; however, they meet the spirit and intent of the law and have been approved by the authorities having jurisdiction. The accessible guestroom count is two fewer than required under ADA-ABA guidelines. In addition, the hotel does not currently have an accessible suite or room with a balcony available.

The main front door to the hotel is heavy and does not have an automatic door opener. Exit doors from the Great Lounge have tall jambs, and the concrete paths leading from the doors are cracked, impeding their use by the mobility-impaired.

The public restrooms available at The Ahwahnee hotel were originally designed to support guests staying at the hotel. Over the years, day use of the facility has become very popular, and fixture counts are low by today's standards. Accessible facilities are available, although not at the number that would be available in a modern facility. An accessible toilet compartment is provided in the men's room on the ground floor and in the women's room on the North Mezzanine. A unisex restroom with accessible fixtures is provided adjacent to the women's restroom, although clearances do not fully meet ADA-ABA standards for wheelchairs.

The existing Registration Lobby area is not set up to provide ADA-ABA-compliant low areas for registration transactions. Concierge and registration personnel meet guests with disabilities in the main area. Wheelchair access through the ground floor thresholds is difficult.

Parking lot configuration, number and size of parking spaces, and path of travel to the hotel from the parking area are not currently sufficient to meet ADA-ABA requirements. A 2009 rockfall resulted in the removal of 41 parking spaces from service due to safety concerns; several of these spaces were ADA-ABA accessible. Their removal has resulted in an overall shortfall in ADA-ABA-accessible parking for The Ahwahnee hotel.

The main path of travel to the cottages is paved and accessible; other paths in the cottage area are uneven. The path of travel to the wedding lawn from the hotel is an uneven flagstone surface that is not accessible.

Heating/Cooling

Guestrooms in the hotel are heated and cooled with a four-pipe system carrying hot and/or cold water. Guestroom ventilation in its current configuration does not function in the manner it was designed to perform. Originally, the hotel guestrooms had operable transom windows above the interior guest doors and operable outside windows. Fans exhausted the guestroom corridors and helped draw air through the rooms, thus providing natural ventilation. The original interior transom windows have been permanently closed for fire safety precautions, leaving guestrooms with only outside windows and no cross ventilation to assist in summer cooling.

The cottages have temporary air conditioning units installed and are minimally heated with small electric resistance heaters.

Environmental Consequences – Methodology

This analysis evaluates the quality of visitor experiences in terms of how they might be altered as a result of the action alternatives. Professional judgment was applied to reach reasonable conclusions as to the context, intensity, and duration of potential impacts.

The analysis of the type of impact was based on whether there would be a complete loss or change in access to or availability of a recreation opportunity, a change in the type or amount of visitor services available, a change in code compliance that would affect visitor experience, a change in the quality of visitor experience or recreational opportunities, or a change in safety.

Context: For the purposes of this analysis, only local impacts are considered. This includes impacts specific to visitor experience in The Ahwahnee hotel area.

Duration: In terms of duration, short-term impacts on the visitor experience would be those impacts that occur during implementation (i.e., construction). Long-term impacts would have a permanent effect on the visitor experience.

Intensity: In terms of intensity, impacts are defined as negligible, minor, moderate, and major. Negligible impacts are effects considered not detectable and would result in little noticeable change in visitor experience. Minor impacts would result in changes in desired experiences, but without appreciably limiting or enhancing the overall effect. Moderate impacts would be clearly detectable and could change the desired experience appreciably. Major impacts would eliminate or greatly enhance characteristics, thereby creating a substantial, highly noticeable influence.

Type: In terms of type, impacts were evaluated in terms of whether they would be beneficial or adverse on visitor participation, quality of visitor experience, or service level.

Environmental Consequences of the No Action Alternative

Analysis

The Ahwahnee hotel and associated structures would remain in their existing conditions with no comprehensive plan for future facility rehabilitation. Periodic maintenance of the public areas and guestrooms would continue, finishes in public areas would continue to deteriorate over time, and nonhistoric additions and windows would remain.

In the event of an emergency evacuation, egress routes would remain inadequate and access to all hotel spaces by emergency personnel during an evacuation would remain difficult due to varied key systems. Unsealed ventilation and mechanical shafts and laundry chutes would contribute to the potential spread of smoke and fire throughout the building in the event of fire. Threats to visitor safety in a seismic event from building elements such as stone veneers, unbraced walls, chimneys, and large bay windows on the ground floor would remain. Ventilation at hotel guestrooms would remain inadequate during the summer, and temporary air conditioning would remain at the cottages.

Accessibility would remain difficult in some areas of the hotel, and some public areas would remain inaccessible. The single means of egress from the South Mezzanine meeting rooms would remain noncompliant with ADA-ABA requirements. The ground floor exterior door thresholds would remain difficult to negotiate. The concierge and registration desks would remain in an inaccessible configuration. The number of accessible rooms and room types would remain noncompliant with ADA-ABA requirements. Accessible parking would remain inadequate, and the path to the wedding lawn from the hotel would remain noncompliant with ADA-ABA requirements.

Public restroom fixture counts would remain inadequate, particularly for women, and hotel visitation would continue to result in restroom queues at the dining hours. The distance to public restrooms from the main hotel entrance would continue to pose challenges for some visitors.

Conclusion: Visitor experience, services, and safety would generally remain in their current condition. Emergency egress at the hotel would remain noncompliant with fire/life-safety codes and standards. The meeting rooms at the South Mezzanine would remain closed to public use. The potential for injury to building occupants during a seismic event from falling hazards would remain. Accessibility would remain difficult in some areas of the hotel, and some public areas of the hotel would remain inaccessible. The number of ADA-ABA-compliant guestrooms and parking spaces would remain inadequate. Bathroom fixture counts would remain insufficient for

the facility. Guestroom air conditioning and ventilation would remain ineffective and uncomfortable during the summer. Historically incompatible aluminum windows would remain in guestrooms. Historic finishes and fabric would continue to deteriorate with no comprehensive plan for their rehabilitation.

Overall, the No Action Alternative would result in a local, long-term, moderate, adverse effect on visitor experience resulting from safety hazards, limited accessibility, insufficient ventilation, and deterioration of historic finishes.

Cumulative Impacts

Recently completed projects improved visitor experience and services through repairs and rehabilitation to existing facilities. Projects evaluated in conjunction with the No Action Alternative include the following: *The Ahwahnee Fire and Life Safety Improvements Project*, *Provide Secondary Egress from 5th and 6th Floors Project*, *The Ahwahnee Hotel Kitchen FRP Board Installation Project*, *The Ahwahnee Rehabilitate Historic Light Fixtures Project*, *The Ahwahnee Hotel Interior Decoration Projects*, *The Ahwahnee Hotel Improve Porte Cochere Access Walkways and Fence Project*, and *Recondition Pool Project*.

Current and/or reasonably foreseeable future actions, projects, and plans that would have a cumulative impact on visitor experience at The Ahwahnee hotel include the *East Yosemite Valley Utilities Improvement Plan*, which provides for utility needs of the aging, inadequate, and inaccessible utility infrastructure within the park, and the *Merced Wild and Scenic River Comprehensive Management Plan*, which addresses development (and/or removal) of facilities, user capacities, and specific management measures to protect and enhance the river's outstandingly remarkable values.

Cumulatively these actions, projects, and plans, when combined with the No Action Alternative, would result in a local, long-term, minor, adverse impact on visitor experience, services, and safety at The Ahwahnee.

Environmental Consequences of Alternative 1

Analysis

Proposed egress improvements at the East Wing would increase the likelihood that building occupants would be able to safely evacuate in the event of an emergency. Four standard guestrooms would be lost on the mezzanine level due to emergency egress improvements at the East Wing. Two guestrooms would be permanently lost; the remaining space would be redefined as two accessible suites, thus reducing the total room count to 121. The South Mezzanine would remain closed to all public use; visitors would not be able to explore the area and view the Solarium and Great Lounge from above or use the space for private meetings and events.

Fire/ life-safety improvements to the ventilation systems, linen chutes, and exhaust shafts would slow the spread of smoke and fire in an emergency. Automatic sprinkler protection, a fire alarm system, and carbon monoxide detection system in the cottages would provide a reliable means of notifying guests during a smoke or carbon monoxide condition. Improvements to the master key system would facilitate evacuation in an emergency. The proposed seismic improvements would decrease the potential for injury to occupants from falling hazards.

In addition to seismic improvements proposed in all action alternatives, implementation of Alternative 1 would include bracing the Dining Room in the north-south direction, reinforcing

stone chimneys at the hotel, and pinning the exterior granite veneer above egress points. The proposed seismic improvements would decrease the potential for injury to occupants from falling hazards.

Proposed accessibility improvements at ground floor entrances/exits, the service elevator, the Registration Lobby, the event and facility manager offices, and along exterior pathways to the wedding lawn and cottages would bring the hotel further into compliance with ADA-ABA requirements. Two new accessible guestroom suites, one with an accessible balcony, would be added at the mezzanine level in the East Wing, increasing the total number of accessible rooms to seven. Increasing the total number of accessible parking spaces to seven and providing accessible paths of travel from the parking lot to the hotel would also be compliant with ADA-ABA requirements.

New bathroom facilities on the ground floor would include a unisex restroom, and on the mezzanine the women's restroom would be expanded to increase the fixture count. The Ahwahnee Bar would be reconfigured. The Ahwahnee Bar back bar and food preparation area would be moved to the north end of the space, and glazing would be added to the east wall, replacing incompatible, nonhistoric additions. These actions would enhance the visitor's sense of arrival at the main entrance to the hotel. Operational improvements at the Ahwahnee Bar would improve visitor service.

Throughout the building, historic features with 'poor' condition ratings (see Appendix C) would be rehabilitated or stabilized; historic features of Very Significant and Significant spaces in 'fair' condition would be rehabilitated or preserved. The proposed work would help preserve the National Historic Landmark for present visitors and future generations.

The heating system and cooling systems at the hotel and cottages would be replaced. The emergency generator would be replaced, and critical electrical upgrades completed. Aluminum guestroom windows at the hotel would be replaced with historically compatible wood-framed, double-paned casement windows with insulated, low-emissivity (low-e) glass. These actions would make indoor spaces, including guestrooms, more comfortable in temperature extremes and during power outages.

Conclusion: Proposed fire/life-safety and seismic stability improvements under Alternative 1 would result in long-term beneficial impacts on visitor safety at The Ahwahnee. The loss of two standard guestrooms would slightly affect room availability. Accessibility improvements, rehabilitation of historic features, increased restroom fixture counts, and improved heating and cooling systems would enhance the visitor experience at the facility. Reconfiguration of the Ahwahnee Bar would improve visitor services through operational upgrades. The addition of glazing to the bar's east wall would enhance the sense of arrival at the main entrance to the hotel. Upgrades to building systems would maintain the level of service for day visitors and overnight guests. Overall, improvements proposed with Alternative 1 would result in a local, long-term, minor to moderate, beneficial impact on visitor experience, services, and safety.

Cumulative Impacts

Recently completed projects improved visitor experience, safety, and services through repairs, conformance with fire/life-safety codes, and rehabilitation to existing facilities. These projects included *The Ahwahnee Fire and Life Safety Improvements Project*, the *Provide Secondary Egress from 5th and 6th Floors Project*, *The Ahwahnee Hotel Kitchen FRP Board Installation Project*, *The Ahwahnee Rehabilitate Historic Light Fixtures Project*, *The Ahwahnee Hotel Interior Decoration*

Projects, The Ahwahnee Hotel Improve Porte Cochere Access Walkways and Fence Project, and the Recondition Pool Project.

Current and/or reasonably foreseeable future actions, projects, and plans that would have a cumulative effect on visitor experience at The Ahwahnee hotel include the *East Yosemite Valley Utilities Improvement Plan*, which provides for utility needs of the aging, inadequate, and inaccessible utility infrastructure within the park, and the *Merced Wild and Scenic River Comprehensive Management Plan*, which addresses development (and/or removal) of facilities, user capacities, and specific management measures to protect and enhance the river's outstandingly remarkable values.

Cumulatively these actions, projects, and plans, when combined with the Alternative 1, would result in a local, long-term, moderate, beneficial impact on visitor experience, services, and safety.

Environmental Consequences of Alternative 2

Analysis

Proposed egress improvements at the East Wing and South Mezzanine with Alternative 2 would increase the likelihood that building occupants would be able to safely evacuate in the event of an emergency. One standard guestroom would be lost and one standard guestroom would be converted to an accessible suite due to the egress improvements at the East Wing, thus reducing the total room count to 122. The new exterior egress at the Tresidder Room would allow full public use of the South Mezzanine to resume.

Fire/life-safety improvements to the ventilation systems, linen chutes, and exhaust shafts would slow the spread of smoke and fire in an emergency. Improvements to the master key system would facilitate evacuation in an emergency. Automatic sprinkler protection, a fire alarm system, and carbon monoxide detection system in the cottages would provide a reliable means of notifying guests during a smoke or carbon monoxide condition.

In addition to seismic improvements proposed in all action alternatives, implementation of Alternative 2 would include pinning of all exterior granite veneers; reinforcing walls in the Solarium and Elevator Lounge; bracing all mechanical, electrical, and plumbing equipment; and providing structural bracing improvements to the Porte Cochere and Entry Gallery. The proposed seismic improvements would decrease the potential for injury to occupants from falling hazards.

Proposed accessibility improvements at ground floor entrances/exits, the service elevator, at the check-in and concierge desk, and at the event and facility manager offices, along exterior pathways to the wedding lawn and cottages, and the addition of a limited use/limited access elevator to access the South Mezzanine would bring the hotel further into compliance with ADA-ABA requirements. The addition of two new accessible guestrooms, including a guestroom suite with an accessible balcony on the mezzanine level of the East Wing and a standard guestroom on the fourth floor, would increase the number of accessible guestrooms to seven.

Bathroom facilities on the ground floor would include a new accessible women's restroom and a reconfigured men's restroom to increase fixture count. The Ahwahnee Bar would be remodeled, and incompatible, nonhistoric additions on the north and east side would be replaced with more sensitive design solutions, including a new wood-framed glass wall. These improvements would enhance the visitor's sense of arrival at the main entrance to the hotel, and would also enhance visitor service through operational improvements behind the bar.

Throughout the building, features with ‘poor’ condition ratings would be rehabilitated or stabilized; Very Significant and Significant spaces in ‘fair’ condition would be rehabilitated or preserved. All non-maintenance treatment recommendations for historic fabric and features, as specified in the Historic Structures Report (ARG 2011), would be implemented in Contributing and Historic Utilitarian spaces (see Appendix C). The proposed work would help preserve the National Historic Landmark for present visitors and future generations.

With implementation of Alternative 2, the heating system and cooling systems at the hotel and cottages would be replaced; additional air conditioning would be provided in public indoor spaces, including the South Wing; and guestroom ventilation would be improved. The emergency generator would be replaced, and critical electrical upgrades completed. Aluminum guestroom windows at the hotel would be replaced with historically compatible wood-framed, double-paned casement windows that have insulated, low-emissivity (low-e) glass. These actions would make indoor spaces, including guestrooms, more comfortable in temperature extremes and during power outages.

Conclusion: Proposed fire/life-safety and seismic improvements under Alternative 2 would result in long-term, beneficial impacts on visitor safety at The Ahwahnee. The loss of one standard guestroom would have a negligible impact on room availability. Re-established public access to the South Mezzanine, accessibility improvements, rehabilitation of historic features, increased fixture counts in the restrooms, and improved and expanded heating and cooling systems would enhance the visitor experience throughout the facility. The remodeled Ahwahnee Bar would improve visitor services through operational upgrades behind the bar. The addition of wood-framed glass at the north wall would enhance the visitor’s sense of arrive at the main entrance to the hotel. Overall, improvements proposed under Alternative 2 would result in a local, long-term, moderate, beneficial impact on visitor experience, services, and safety.

Cumulative Impacts

The cumulative impact of Alternative 2 would be the same as under Alternative 1.

Environmental Consequences of Alternative 3

Analysis

Proposed egress improvements at the East Wing under Alternative 3 would increase the likelihood that building occupants would be able to safely evacuate in the event of an emergency. Four standard guestrooms would be lost on the mezzanine level due to emergency egress improvements at the East Wing. Two guestrooms would be permanently lost; the remaining space would be redefined as two accessible suites, thereby reducing the total room count to 121. The new exterior exit at the Tresidder Room would allow public use of the South Mezzanine to resume.

Fire /life-safety improvements to the ventilation systems, linen chutes, and exhaust shafts would slow the spread of smoke and fire in an emergency. Improvements to the master key system would facilitate evacuation in an emergency. Automatic sprinkler protection, a fire alarm system, and carbon monoxide detection system in the cottages would provide a reliable means of notifying guests during a smoke or carbon monoxide condition.

In addition to seismic improvements proposed in all action alternatives, implementation of Alternative 3 would include providing structural bracing improvements to the Porte Cochere and

Entry Gallery. The proposed seismic improvements would decrease the potential for injury to occupants from falling hazards.

Proposed accessibility improvements at ground floor entrances/exits, the service elevator, the check-in and concierge desk, the event and facility manager offices, and the addition of a limited use/limited access elevator to access the South Mezzanine would bring the hotel further into compliance with ADA-ABA requirements. Two new accessible guestroom suites, one with an accessible balcony, would be added at the mezzanine level in the East Wing, thus increasing the total number of accessible rooms to seven.

The men's public restroom on the ground floor and the women's public restroom on the mezzanine level would be expanded, and the numbers of fixtures would be increased. These additional fixtures would reduce lines for the facilities, particularly during dining hours. A new, escorted-access-only, unisex accessible restroom would be provided within the footprint of the maintenance building.

The Ahwahnee Bar would be remodeled, and incompatible, nonhistoric additions on the north and east sides would be replaced with more sensitive design solutions, including a new wood-framed glass wall. The improvements would enhance the visitor's sense of arrival at the main entrance to the hotel, and also would enhance visitor service through operational improvements behind the bar.

Throughout the building, historic features with 'poor' condition ratings would be rehabilitated or stabilized. Historic fabric and features in Very Significant and Significant spaces in 'fair' condition would be rehabilitated or preserved, and rehabilitation work associated with the proposed actions would help preserve the integrity of the National Historic Landmark and continue to make the facility available to visitors of today and future generations.

The heating system and cooling systems at the hotel and cottages would be replaced, but no additional air conditioning would be provided. The emergency generator would be replaced and critical electrical upgrades completed. Aluminum guestroom windows at the hotel would be replaced with historically compatible wood-framed, double-paned, insulated, low-emissivity (low-e) glass casement windows. These actions would make indoor spaces more comfortable in temperature extremes and during power outages.

Conclusion: Proposed fire life-safety and seismic improvements under Alternative 3 would result in long-term beneficial impacts on visitor safety at The Ahwahnee. The loss of two standard guestrooms would slightly affect room availability. Restored public access to the South Mezzanine, accessibility improvements, rehabilitation of historic features, increased restroom fixture counts, and improved heating and cooling systems would enhance the visitor experience at the facility. The remodeled Ahwahnee Bar would improve visitor service through operational upgrades behind the bar. The addition of wood-framed glass would enhance the sense of arrival at the main entrance to the hotel. Overall, improvements proposed in Alternative 3 would result in a long-term, moderate, beneficial impact on visitor experience, services and safety.

Cumulative Impacts

The cumulative impact of Alternative 3 would be the same as under Alternative 1.

Facility Operations and Infrastructure

Affected Environment

The Ahwahnee hotel is a year-round, concessioner-operated, luxury hotel and day-use destination in Yosemite Valley. The facility provides services for overnight guests and day-use visitors that include dining, meeting facilities, retail outlets, private rooms, special events, and areas to relax or congregate. Operations at The Ahwahnee hotel can be categorized as either NPS or concessioner functions.

National Park Service

In general, the National Park Service is responsible for maintaining the infrastructure outside the building (i.e., water lines, wastewater disposal, storm water management, electrical service, and roads), and providing visitor interpretation, protection, and emergency services. The National Park Service does not maintain a physical or operational presence at The Ahwahnee hotel. NPS operations are based from either outside the park in El Portal or elsewhere in Yosemite Valley.

Concessioner

The concessioner is responsible for operating the facility as both a luxury hotel for guests and a day use destination for park visitors. The concessioner operates the hotel as an AAA®-rated, four-diamond hotel with dining, seasonal special events, wedding facilities, overnight accommodations, interpretive services, and retail outlets. The concessioner is responsible for maintaining the exterior and interior of the building, including seasonal repairs to roofing, balconies, and the exterior of the building. The concessioner is also responsible for maintaining entrance roads, parking areas, walkways, and grounds. Interior upkeep of all spaces, including painting and the maintenance and repair of mechanical, electrical, and plumbing systems, are ongoing.

Fire and Life-Safety

Recent fire and life-safety upgrades at the hotel include secondary egress from the 5th and 6th floors and installation of fire sprinklers, detectors, and alarm systems throughout the hotel, as well as smoke curtains and fire department connections. Fire alarm and sprinkler systems are regularly tested and maintained by the concessioner. Several unresolved fire and life-safety issues remain.

At the recommendation of the Yosemite National Park fire marshal, the South Mezzanine meeting rooms were closed to public use in March 2011 due to inadequate emergency egress. Currently, business use by either concessioner or park staff only (up to a maximum occupancy of 30 people in the Colonial Room and Tudor Room) is allowed. All uses of the Tresidder Room have been suspended by the fire marshal. Hotel staff carry food, beverages, and meeting equipment up and down the single staircase to service these rooms.

The existing East Wing secondary egress from the second floor to the first floor (mezzanine) is via a narrow, non-compliant, exterior spiral staircase. At the mezzanine level this egress route connects to an exterior stair to ground level at the east and south side of the Ahwahnee Bar.

Fire code-compliant fire separation does not exist between the wood-framed Dining Room and the concrete and steel main hotel and Kitchen wing. In addition, the linen chutes and

ventilation/mechanical shafts throughout the hotel are not sealed at the top, bottom, or between floors at openings, and the elevator shafts have several unsealed penetrations.

The current master key system for guestrooms and supply rooms in the hotel is not a uniform, integrated system. In an emergency, firefighters would have difficulty accessing rooms in a timely manner to ensure guests and employees evacuate rooms and access spaces.

Site access around the hotel and to the cottages for emergency vehicles is not adequate. The driving surface around the perimeter of the building is narrow, not maintained to fire code, and lacks the ability to safely support the weight of a fully equipped fire engine. In addition, the hardened access does not extend fully around the South Wing of the hotel. Access by emergency vehicles to the cottages is not compliant with current fire code; the existing road is narrow and lacks adequate drainage crossing structures and areas to turn emergency vehicles around. The majority of the cottages are more than 50 feet from a fire department access road and several of the cottages are more than 150 feet from the existing fire department access road. Neither the cottages nor the employee dormitory have fire sprinklers, and smoke detectors and alarm systems are not fully code compliant.

Accessibility Compliance

South Mezzanine Meeting Rooms

The South Mezzanine is accessible only by a single, open, interior stairway. The three very significant historic rooms (Tressider Room, Tudor Lounge, and the Colonial Room) and the two flanking balconies are not accessible to the mobility-impaired.

Locker Room and Employee Breakroom

There are about 200 employee lockers with men's and women's changing and shower facilities located above the Gift Shop, and these lockers are accessed from the loading dock area. The employee breakroom is located off the Kitchen; employees using the existing breakroom must cross through the Kitchen to access the area. Access or equal facilitation for disabled employees to these main facilities is not provided.

Administrative Offices

Administrative offices are located in three general locations:

- behind the front desk for the Assistant Manager and General Manager, with space for other staff;
- on the first floor (mezzanine level);
- at the Business Center located on the North Mezzanine.

Office space is limited and insufficient; none of the offices is accessible by mobility impaired guests or employees.

At the North Mezzanine exit stair (near the service elevator), the existing door configuration opens onto a stair, which creates a falling hazard and is not in compliance with ADA-ABA requirements.

Ahwahnee Bar

The Ahwahnee Bar is located in what was originally designed to be the Porte Cochere. The food preparation area and the bar are not accessible for employees.

Operational Efficiency

Kitchen

Kitchen facilities are located on the ground floor of The Ahwahnee hotel in a separate wing adjacent to the Dining Room. All food preparation is done on site in the Kitchen. On-site coolers/freezers and food storage are insufficient in size; additional temporary facilities are set up for special events during the winter season.

The overall layout of the Kitchen is problematic, with safety concerns caused by the placement of hot cooking stations and food pick up areas. The Kitchen also lacks a dedicated plating area for banquets. Hotel employees must cross through the Kitchen to access the breakroom in the back of the Kitchen.

Additional health and operational issues include the following:

- The walls and doors of the Kitchen are not completely sealed, thus allowing rodents and insects to access the area.
- The Kitchen ceiling height is very high and the material is impossible to sanitize.
- In the main Kitchen area, some areas lack individual hand washing stations.
- Food prep sinks are old and difficult to clean in the main Kitchen.
- The dishwasher area lacks a three compartment sink.

Ahwahnee Bar

Food ordered in the Ahwahnee Bar is served from the main Kitchen, and the bar service station lacks hand sinks and required clearances for employees with disabilities.

Storage Shed / Bellhop Area

The existing storage shed / bellhop area is undersized.

Mechanical, Electrical, and Plumbing Systems

Mechanical

Over the years, the mechanical systems serving the main hotel, cottages, and dormitory building have consisted of a number of systems and system types that have been maintained, modified, and improved. Maintenance requirements and emergency repairs increase as the systems age.

Heating Systems

When the hotel was completed in 1927, the heating system consisted of two low-pressure steam boilers located in the basement and steam radiators located throughout the building, including the guestrooms. The original boilers were replaced in 1956 and again in 1984. The original steam radiators and piping system in the public spaces and a few “back of house” spaces are still in operation.

In 1990, the hotel heating system was upgraded. The majority of the steam distribution piping and radiators were replaced with the current system that uses steam to hot water heat exchangers. The hot water piping system was extended at this time, and new air handling units were installed to heat public spaces, including the Dining Room, Gift Shop, Sweet Shop, and the women’s restroom. A new hot water distribution system for heating was installed to distribute hot (and chilled) water to individual four-pipe fan coils units located in each guestroom. This system relies

on electrical power for distribution. Access to the mechanical fan coils in rooms to service this system is very limited, and the fan coil units are reaching the end of their design life.

The steam boilers also heat the domestic hot water system via heat exchangers, provide heat for the pool through equipment located in the boiler room, and heat the dormitory building. The steam is distributed from the hotel to the dormitory building through piping that was recently replaced. The boiler room lacks proper ventilation.

In 2005 new heating, cooling, and exhaust systems were installed for the Kitchen area. The propane-fired, hot water boiler system used for heating is located on the Kitchen mezzanine.

Until recently, each cottage was heated by two electrical heaters. In 2009, split-system heat pumps were installed and one of the electrical heaters in each cottage was replaced with an indoor fan coil. The second electrical heater located in the bathroom remains and is integral to the toilet exhaust system.

Cooling Systems

A chilled water system for air conditioning was added to the hotel in 1990. The chilled water and hot water system together create the four-pipe system that provides cooling (and heating) to the guestrooms, the Dining Room, the Sweet Shop, and the Gift Shop. The remaining spaces in the hotel are not air conditioned.

The water system capacity was originally designed to heat and cool the cottages in addition to the hotel. The systems were never connected, and the chiller has never operated at full capacity. During the original installation, louvers in the cooling tower were not adequately sized according to the manufacturer's recommendations. However, since the chiller has never operated at full capacity, the lack of louvers has not been detrimental. The chilled water system uses R-22 (a HCFC) refrigerant, which will be phased out in 2020. The chiller room lacks ventilation.

The dormitory is generally not air conditioned; some through-the-wall individual electric air conditioners have been installed in the building.

At the cottages, temporary exterior heat pumps with indoor fan coils for air conditioning were installed in 2009.

Guestroom Ventilation

Ventilation, in its current configuration, does not function in the manner it was designed to perform. Originally, The Ahwahnee hotel guestrooms had operable transom windows above the interior guest doors and operable outside windows. Fans exhausted the guestroom corridors and helped draw air through the rooms and provided natural ventilation. The original interior transom windows have been permanently closed for fire safety precautions, thus leaving guestrooms with only outside windows and no cross ventilation to assist in cooling during the summer.

Electrical Systems

Electrical service is provided to the hotel by two separate services. One utility-owned transformer is located in an in-ground vault just outside the cooling tower shed, adjacent to the northwest corner of the Kitchen wing. This service provides power to the Kitchen, the supplementary Kitchen equipment in the mezzanine, and the hotel's mechanical air conditioning system.

The majority of the building's electrical load comes from a utility-owned transformer that resides in a room within The Ahwahnee hotel footprint at the northwest corner of the Kitchen wing. This

transformer feeds a main distribution panel in the main electric room located adjacent to the transformer. The main distribution panel feeds numerous other panelboard systems for building distribution. The system is in poor condition, with multiple code violations and equipment installed in hazardous locations. The hotel's main electrical distribution panels are located in the basement; water intrusion from seasonally high groundwater results in hazardous conditions for maintenance staff.

The original cloth-wrapped wiring is found throughout the hotel. The wiring for Kitchen equipment consists of conduit and wire. Wiring underneath the Kitchen floor is in poor shape, and some wiring is exposed and corroded.

In a power outage, the emergency generator is connected to the main distribution panel through a transfer switch in the boiler room. The backup generator can only partially service the hotel due to the two-volt systems that exist in the hotel.

Plumbing

In general, the plumbing systems serving the main hotel consist of a number of systems and system types that have been maintained, repaired, modified, and added to over the years. Maintenance requirements increase with aging systems and leaks and emergency repairs are common.

Sanitary System

The interior sanitary system for The Ahwahnee hotel was installed in 1927 during the hotel construction. For the guestrooms, sanitary waste risers for toilets, lavatories, and bathtubs are located in plumbing chases between each pair of guestrooms. These risers discharge into horizontal mains that run in the ceiling spaces of the floors below. The horizontal mains discharge to vertical risers in various locations throughout the Great Lounge and Solarium, and then into the building drain located in the crawl space. The main vertical riser in the north tower chase (through the Great Lounge) has no supports. This has caused it to tilt and bend through the years.

In its current state, the sanitary system handles a fraction of its intended design due to buildup in the pipe system. Cleanouts were not installed on the upper floors, which causes difficulties in clearing drains when blockages occur. Due to the design life of the piping, the current system is in very poor condition throughout the hotel. The fittings and horizontal sanitary piping in the ceiling and crawl spaces are in very poor condition and are a constant source of leaks needing repair. Leaks above the Great Lounge have caused substantial damage to historic stenciling on the ceiling beams in that very significant public space. The main waste risers in the hotel crawlspace serve bathrooms on the South and East Wing floors above the crawlspace.

Waste lines beneath the kitchen were replaced in the early 1990s. Due to minerals in the water, these pipes are in poor condition from corrosion and oxidation. One of the dishwasher lines drains high-temperature hot water directly into the grease interceptor disposal line; this does not allow the grease trap to work properly.

Domestic Water System

The hotel's domestic water system was installed in the early 1990s and begins with a 6-inch line entering the south end of the crawlspace under the hotel. The domestic water passes through a hydraulically operated pressure-reducing station. The station is in poor condition, shows signs of corrosion, and is not functioning. Code-compliant water pressure following this valve should be

80 pounds per square inch (psi) or less, but pressure readings upstream and downstream of the device are approximately 114 psi.

The domestic hot water system is heated by the hotel's hot water heating system and stored in two 1,500-gallon tanks located in the basement. One of these tanks has been abandoned; the second storage tank is currently being used but is in extremely poor condition and requires patch work to maintain its operation. Most of the current domestic water supply plumbing system was upgraded to copper from galvanized piping in the 1990s. Fixtures are low-flow when possible and are generally in good working order.

Hazardous Materials

Early coats of paint on The Ahwahnee hotel, cottages, and the dormitory building likely contain lead. Asbestos has been identified in steam pipe insulation and a few other materials. Asbestos abatement has been performed at the hotel during previous projects; however, some asbestos could still be present in the facility.

Environmental Consequences Methodology

This analysis evaluates how operation and infrastructure might be altered as a result of the No Action and action alternatives. Analysis was based on whether there was a loss, gain, or change in the efficiency of operations or infrastructure or a change in public and employee safety. The proposed action alternatives in this comprehensive rehabilitation plan environmental assessment were evaluated in terms of the context, intensity, and duration of impacts on concessioner or NPS operations and facilities, and whether the impacts would be considered beneficial or adverse. Professional judgment was applied to reach reasonable conclusions as to the intensity and type of potential impacts.

Context: For the purposes of this analysis, only local impacts are considered. This includes impacts specific to operation and facilities within The Ahwahnee hotel, grounds, and cottages.

Duration: The duration of the impact considers whether the impact would occur in the short term or long term. A short-term impact would be temporary in duration and associated with construction-related activities. A long-term impact would have a permanent effect on operations and facilities.

Intensity: The intensity of the impact considers whether the impact would be negligible, minor, moderate, or major on operations and facilities. Negligible impacts are effects considered not detectable and would have no discernible effect. Minor impacts on operations and facilities would be slightly detectable but not expected to have an overall effect. Moderate impacts would be clearly detectable and could have an appreciable effect. Major impacts would have a substantial, highly noticeable influence on operations and facilities and include those impacts that would reduce the ability to provide adequate services and facilities to visitors and staff.

Type: Impacts were evaluated in terms of whether they would be beneficial or adverse to operations or facilities. Beneficial impacts would improve operations, maintainability, and/or facilities. Adverse impacts would negatively affect operations, maintainability, and/or facilities or could impede the ability to provide adequate services and facilities.

Environmental Consequences of the No Action Alternative

Analysis

The No Action Alternative would be a continuation of the current condition and management as described in Chapter 2 and in the “Affected Environment” section above.

Impacts on facility operations and infrastructure, fire and life-safety concerns, and code violations would continue to result from the following conditions:

- Fire truck access around the hotel and to the cottages would remain limited.
- Route of egress in the hotel exiting the mid-level floors would remain unclear and difficult to follow.
- Non-compliant vertical chutes and shafts could act as conductors for smoke and flame in a fire emergency.
- The hotel key system would remain difficult to manipulate in an emergency.
- Electrical panels and systems would remain in the basement location, an area that periodically floods.
- Elevator shafts and controls would not meet current fire code.

The Ahwahnee Bar would remain in its current configuration and employee accessibility and health code concerns would persist. Food service would rely on the main Kitchen. The work area would not be accessible to all employees. The Kitchen area would remain in poor condition with an inefficient layout, and health code violations (e.g., a lack of dedicated sinks, a cleanable ceiling, and a clear separation of kitchen functions). The Kitchen would continue to lack sufficient storage for banquet events. Employees would continue to access the common breakroom located in the back of the Kitchen.

Office space for managers would remain limited and insufficient. The maintenance storage shed and bellhop area would remain undersized.

Mechanical, electrical, and plumbing systems throughout The Ahwahnee hotel would remain obsolete, with critical elements of most major systems having exceeded their expected service lifetimes. Regular, ongoing maintenance, as well as emergency repairs and piecemeal component replacements would be expected to increase with the age of the systems. Access to mechanical systems would remain challenging. Seasonally high groundwater would continue to create hazardous conditions for maintenance staff servicing electrical systems in the hotel basement. Sanitary plumbing systems would continue to require frequent emergency repairs and spill cleanup.

Conclusion: The No Action Alternative would continue noncompliance with fire/life-safety, accessibility, and health codes. Deterioration of portions of the facility, increasingly greater maintenance needs, and noncompliant employee work areas would persist. Therefore, the No Action Alternative would result in a local, long-term, moderate, adverse impact on operations, maintenance requirements, and facility infrastructure at The Ahwahnee.

Cumulative Impacts

Past projects that have been evaluated in conjunction with the impacts of proposed action alternatives include *Install ADA Compliant Elevator Controls*, *Yosemite Valley Shuttle Bus Stop Improvements*, *The Ahwahnee Hotel Kitchen FRP Board Installation Project*, *The Ahwahnee Hotel*

Interior Decoration Projects, Interim Rockfall Parking Plan for The Ahwahnee, The Ahwahnee Fire and Life Safety Improvements Project, Secondary Egress from 5th and 6th Floors Project, The Ahwahnee Hotel Kitchen FRP Board Installation Project, The Ahwahnee Rehabilitate Historic Light Fixtures Project, The Ahwahnee Hotel Interior Decoration Projects, The Ahwahnee Hotel Improve Porte Cochere Access Walkways and Fence Project, and Recondition Pool Project. These past projects have improved existing facilities and reduced ongoing maintenance requirements.

Current and/or reasonably foreseeable future actions, projects, and plans that would have a cumulative effect on The Ahwahnee hotel facility and operations include the *East Yosemite Valley Utilities Improvement Plan*, which would provide for utility needs of the aging, inadequate, and inaccessible utility infrastructure within the park, and the *Correct Grease Trap Design Deficiencies Project*.

Cumulatively, these actions, projects, and plans, when combined with the No Action Alternative, would result in a local, long-term, moderate, adverse impact on operations and facility infrastructure at The Ahwahnee hotel.

Environmental Consequences of Alternative 1

Analysis

Actions to improve conformance with fire and life-safety codes at The Ahwahnee hotel and cottages would include the following:

- Improving fire truck access around the hotel building and to the cottages;
- Adding compliant egress at the East Wing;
- Continuing closure of South Mezzanine meeting rooms (Tresidder Lounge, Colonial Room, and Tudor Lounge) to public use, although per fire code the Colonial Room and Tudor Lounge could remain available for employee meetings with up to 30 park or concessioner staff;
- Upgrading vertical shafts, chutes, venting systems, and fire separation throughout the building to provide protection to inhibit the uncontrolled spread of fire or smoke;
- Re-keying hotel locks for ease of fire department access in the event of an emergency;
- Installing a central fire alarm system, carbon monoxide detection system, and sprinkler system at the cottages and dormitory that would improve emergency personnel response and allow for more expedient evacuation of the buildings;
- Addressing hazardous conditions in the basement by waterproofing and installing proper grounding at electrical distribution panels.

Kitchen health code compliance and operational improvements would be accomplished as part of the construction of the new Kitchen mezzanine designed to brace the Dining Room in a seismic event. The new Kitchen layout would increase efficiency and address the health code compliance issues; however, refrigerated space would remain inadequate during special events.

Reconfiguration of the main Kitchen would improve defined areas for food preparation, cooking, plating, and service by separating work stations. Employee safety would be improved by moving hot surfaces from busy areas and creating a more functional layout. Upgrades to Kitchen infrastructure would improve food preparation and service conditions for employees and contribute to a more efficient Kitchen.

Relocating the employee locker/changing facilities to the new Kitchen mezzanine area would reroute the path of travel out of the main Kitchen, thereby improving the overall function of the

Kitchen. The locker rooms would be increased in size and made ADA-ABA accessible. Reconfiguration of existing administrative office spaces and the addition of new offices on the new Kitchen mezzanine would provide sufficient, accessible space for managers. Improvements to the Ahwahnee Bar and prep kitchen would include improved ADA accessibility to the workstation, expanded storage capacity, and expanded health-code-compliant facilities at the bar. The limited use/limited access elevator installed for the South Mezzanine would provide accessible spaces for NPS or concessioner employee meetings.

Improvements to mechanical, electrical, and plumbing systems throughout the facility would reduce regular maintenance requirements and the frequency of emergency repairs. Waterproofing the hotel basement would reduce risks to maintenance staff working with electrical equipment. New heating and cooling systems would be easier to access and replacement parts would be more readily available.

Conclusion: Implementation of Alternative 1 would address fire/life-safety code issues throughout the building; upgrade critical mechanical, electrical, and plumbing systems; provide a code-compliant Kitchen and Ahwahnee Bar; provide a limited use/limited access elevator to the South Mezzanine, and provide accessible work and break areas for employees. Overall, implementation of Alternative 1 would result in a long-term, moderate, beneficial impact on operations, maintenance, requirements, and facility infrastructure at The Ahwahnee.

Cumulative Impacts

Past projects that have been evaluated in conjunction with the impacts of proposed action alternatives include *Install ADA Compliant Elevator Controls*, *Yosemite Valley Shuttle Bus Stop Improvements*, *The Ahwahnee Hotel Kitchen FRP Board Installation Project*, *The Ahwahnee Hotel Interior Decoration Projects*, *Interim Rockfall Parking Plan for The Ahwahnee*, *The Ahwahnee Fire and Life Safety Improvements Project*, *Secondary Egress from 5th and 6th Floors Project*, *The Ahwahnee Hotel Kitchen FRP Board Installation Project*, *The Ahwahnee Stabilize Kitchen Floor Project*, *The Ahwahnee Rehabilitate Historic Light Fixtures Project*, *The Ahwahnee Hotel Interior Decoration Projects*, *The Ahwahnee Hotel Improve Porte Cochere Access Walkways and Fence Project*, and *Recondition Pool Project*. These past projects have improved existing facilities and reduced ongoing maintenance requirements.

Current and/or reasonably foreseeable future actions, projects, and plans that would have a cumulative effect on The Ahwahnee hotel facility and operations include the *East Yosemite Valley Utilities Improvement Plan*, which would provide for utility needs of the aging, inadequate, and inaccessible utility infrastructure within the park, and the *Correct Grease Trap Design Deficiencies Project*.

Cumulatively, these actions, projects, and plans, when combined with Alternative 1 (i.e., address fire/life-safety code issues throughout the building; upgrade critical mechanical, electrical, and plumbing systems; improve operational efficiencies in the Kitchen and Ahwahnee Bar; and provide code-compliant, accessible work and break areas for employees), would result in a local, long-term, moderate, beneficial impact on operations, maintainability, and the facility.

Environmental Consequences of Alternative 2

Conformance with fire/life-safety codes at The Ahwahnee hotel and cottages would include the following:

- Improving fire truck access around the hotel building and to the cottages.
- Adding compliant egress at the South Mezzanine and East Wing.
- Upgrading vertical shafts, chutes, venting systems and fire separation throughout the building to provide protection to inhibit the uncontrolled spread of fire or smoke.
- Replacing exhaust shafts in the guestroom bathrooms with a new metal fully ducted system; sealing the bottom of shafts, and installing wood-blocking or fire-proofing at all floor penetrations, improving fire resistance between floors.
- Providing an electronic card reader system for hotel locks that would allow use of one master key for emergency access;
- Installing a central fire alarm system, carbon monoxide detection system, and sprinkler system at the cottages and dormitory that would improve emergency personnel response and allow for more expedient evacuation of the buildings.
- Addressing hazardous conditions in the basement by waterproofing and installing proper grounding at electrical distribution panels.

The new mezzanine area above the Kitchen would be larger than the structure proposed in Alternatives 1 and 3 and would provide the maximum area for additional offices and meeting facilities. Kitchen code compliance would be accomplished as part of the construction of the new Kitchen mezzanine designed to brace the Dining Room in a seismic event. The new Kitchen layout would increase efficiency and address the health code compliance issues. Refrigerated space would be increased, thereby allowing for sufficient storage during special events.

The new mezzanine also would provide a cleanable ceiling over the food preparation areas. Reconfiguration of the main Kitchen would improve defined areas for food preparation, cooking, plating, and service by separating work stations. Employee safety would be improved by moving hot surfaces from busy areas and creating a more functional layout. Upgrades to Kitchen infrastructure would improve food preparation and service conditions for employees and contribute to a more efficient Kitchen.

Relocating the employee locker/changing facilities to the new Kitchen mezzanine area would reroute the path of travel out of the main kitchen, improving the overall function of the kitchen. The locker rooms would be increased in size and made ADA-ABA-accessible. Reconfiguration of existing administrative office spaces and the addition of new offices on the new Kitchen mezzanine would provide sufficient, accessible space for managers.

Improvements to the Ahwahnee Bar back bar and prep kitchen would include improved ADA accessibility to the workstation, health-code compliance upgrades in the form of a handwashing sink and a food preparation sink, expanded storage capacity, and expanded facilities at the bar. Installation of a limited use/limited access elevator for the South Mezzanine would provide accessible spaces for public or NPS or concessioner employee meetings, and would provide a mechanized system to assist in transferring food and service items.

Vertical clearance at the Porte Cochere would be increased to provide clearance for tour buses. Bellhops would unload buses in the protected entry area. Buses would not need to back out of the

parking lot as they currently do but could continue through the Porte Cochere parking area to exit.

The new maintenance shed proposed with Alternative 2 would provide operational improvements, including additional storage for the Gift Shop, enclosed garbage and recycling spaces, an enlarged luggage and valet/bellhop area, and an escorted-access-only unisex bathroom. The footprint of the new maintenance building would restrict service vehicle parking and access at the loading dock.

Improvements to mechanical, electrical, and plumbing systems throughout the facility would reduce regular maintenance requirements and the regularity of emergency repairs to operations. Waterproofing the hotel basement would reduce risks to maintenance staff working with electrical equipment. New heating and cooling systems would be easier to access, and replacement parts would be more readily available. Additional upgrades to plumbing and wiring; bracing all mechanical, electrical, and plumbing, and kitchen equipment for stability in a seismic event; and providing a new main point of entry for telecommunications, are additional safety upgrades that would be provided under Alternative 2.

Conclusion: Implementation of Alternative 2 would include the same beneficial impacts on operations and facilities outlined in Alternative 1. In addition, Alternative 2 would provide secondary emergency egress from the South Mezzanine; provide additional upgrades or replacement of mechanical, electrical, and plumbing systems; provide a new point of entry for telecommunications; maximize the use of a kitchen mezzanine for employee facilities; provide an enlarged maintenance shed with an additional public restroom; and raise the Porte Cochere to accommodate buses. Overall, implementation of Alternative 2 would result in a local, long term, moderate to major, beneficial impact on operations, maintenance requirements, and facility infrastructure at The Ahwahnee.

Cumulative Impacts

The actions, projects, and plans that would have a cumulative impact on operations at The Ahwahnee would be the same as those identified under Alternative 1. In combination with Alternative 2, the cumulative actions, project, and plans would result in a local, long-term, moderate to major, beneficial impact on park operations.

Environmental Consequences of Alternative 3

Conformance with fire and life-safety codes at The Ahwahnee hotel and cottages under Alternative 3 would include the following:

- Improving fire truck access around the hotel building and to the cottages.
- Adding compliant egress at the South Mezzanine and East Wing.
- Upgrading vertical shafts, chutes, venting systems and fire separation throughout the building to provide protection to inhibit the uncontrolled spread of fire or smoke.
- Rekeying hotel locks for ease of evacuation in the event of an emergency.
- Installing a central fire alarm system, carbon monoxide detection system, and sprinkler system at the cottages and dormitory that would improve emergency personnel response and allow for more expedient evacuation of the buildings.
- Addressing hazardous conditions in the basement by waterproofing and installing proper grounding at electrical distribution panels.

Kitchen code compliance would be accomplished as part of the construction of the new Kitchen mezzanine designed to brace the Dining Room in a seismic event. The new Kitchen layout would increase efficiency and address existing health code compliance issues. Refrigerated storage space would remain insufficient during special events.

Reconfiguration of the main Kitchen would improve defined areas for food preparation, cooking, plating, and service by separating work stations. Employee safety would be improved by moving hot surfaces from busy areas and creating a more functional layout. Upgrades to Kitchen infrastructure would improve food preparation and service conditions for employees and contribute to a more efficient Kitchen.

Relocating the employee locker/changing facilities to the new Kitchen mezzanine area would reroute the path of travel out of the main kitchen and improve the overall function of the Kitchen. The locker room would be increased in size and made ADA-accessible. Reconfiguration of existing administrative office spaces and the addition of new offices on the new kitchen mezzanine would provide sufficient, accessible space for managers. Improvements to the Ahwahnee Bar back bar and prep kitchen would include improved ADA accessibility to the workstation, expanded storage capacity, and expanded facilities at the bar. The limited-use/limited access elevator installed for the South Mezzanine would provide accessible spaces for NPS or concessioner employee meetings.

The new maintenance shed proposed with Alternative 3 would provide operational improvements, including additional storage for the Gift Shop, an enlarged luggage and valet/bellhop area, and an escorted-access-only unisex bathroom. The service area on the east side of the building would keep the area functional for deliveries.

Improvements to mechanical, electrical, and plumbing systems throughout the facility would reduce regular maintenance requirements and the regularity of emergency repairs to operations. Waterproofing the hotel basement would reduce risks to maintenance staff working with electrical equipment. New heating and cooling systems would be easier to access, and replacement parts would be more readily available. Additional upgrades to plumbing and wiring; bracing all mechanical, electrical, and plumbing, and kitchen equipment for stability in a seismic event; and providing a new main point of entry for telecommunications are additional safety upgrades provided under Alternative 3.

Conclusion: Implementation of Alternative 3 would include the same beneficial impacts on operations and facilities outlined in Alternative 1. In addition, Alternative 3 would provide secondary egress from the South Mezzanine; additional upgrades or replacement of mechanical, electrical, and plumbing systems; a new point of entry for telecommunication systems; and an enlarged maintenance shed that would improve bellhop storage, provide an additional restroom and increase maintenance storage capacity. Overall implementation of Alternative 3 would result in a local, long-term, moderate, beneficial impact on operations, maintenance requirements, and facility infrastructure.

Cumulative Impacts

The cumulative impacts of Alternative 3 would be the same as under Alternative 1.

Socioeconomics

Affected Environment

This section presents information on the social and economic environment in the area that is anticipated to be most affected by decisions made in *The Ahwahnee Comprehensive Rehabilitation Plan*. The Ahwahnee hotel is located in Mariposa County and has a direct fiscal impact on that county. Therefore, this section discusses Mariposa County and the community of Mariposa.

Mariposa County

Population

Mariposa County is located in the western foothills of the Sierra Nevada. The eastern portion of Mariposa County contains a large part of Yosemite National Park, including Yosemite Valley and the administrative headquarters in El Portal. According to the census (U.S. Census Bureau 2010a) population estimates, Mariposa is one of the smallest counties in the state in terms of population (52nd of 58). Population increased slightly less than 4% from 2000 to 2009 to 17,792. With a land area of 1,451 square miles, the population density is just over 12 persons/square mile (U.S. Census Bureau 2009). The population of Mariposa County increased at a faster rate than the state from 1990 to 1997, but has lagged the state since then (CDOF 2007; 2010c). Recent state statistics show that the rate of population increase in Mariposa County from 2009 to 2010 was one of the lowest in the state (CDOF 2010a). State Department of Finance population projections for Mariposa County for 2010 are 18,243, an increase of less than 1% from the 2009 population estimate (CDOF 2010b). The county has no incorporated cities. There are three census designated places, including the town of Mariposa and Yosemite Valley, and 13 other small unincorporated communities, such as El Portal, which serves as a major residential area for park employees and contains park warehouse and administrative facilities. Mariposa serves as the county seat.

Employment

The labor force in Mariposa was 564 in 2000, an increase of 63% over 1990 (U.S. Census Bureau 1990c, 2000b). The leisure service industry sector accounted for the most employment at over 21%. Construction was the second-most important sector, accounting for 16% of employment. Government employment accounted for almost 14%, reflecting Mariposa's role as the county seat. Compared to 1990, the retail trade and financial sectors were less important in 2000. Government employment was consistently one of the most important employment sectors over the decade.

Between 1999 and 2009 the labor force in Mariposa County increased almost 43% from 6,650 to 9,500 (CEDD 2010a). The total wage and salary employment labor force in the county was 5,360 in 2009 (CEDD 2010a). County employment is dominated by the leisure and hospitality sector, which accounted for 39-40% of employment between 2000 and 2009. Government employment also plays a major role, making up 39% of total county employment in 2009. These industries are becoming even more significant in the county over time. Employment in goods-producing industries has been decreasing. In 1990, goods-producing industries (agriculture, mining, logging construction, and manufacturing) made up about 10% of total employment, compared to just over 5% in 2009. An estimated 4,090 jobs were supported by travel spending in 2008; this is a decrease from the estimated 4,300 jobs supported by visitors in 2004 (Dean Runyan Associates 2010).

Over the last decade, the annual average unemployment rate in the county decreased slightly but then increased, from 7.2% in 1999 to 10.6% in 2009 (CEDD 2010b). This is lower than the state's 2009 rate of 11.4%. The county's unemployment rate has historically been close to, and often higher than the state's unemployment rate. The gap between the county and the state unemployment rates has stayed fairly steady over the last decade, with the difference remaining less than 1%.

Fiscal Status

County revenues in 2009-2010 were \$70 million (Mariposa County 2010). Approximately 28% of the revenues were generated by taxes. Transient Occupancy Taxes accounted for over 53% of total taxes, or almost 15% of total county revenues. Public assistance expenses accounted for 31% of total county expenditures, and another 27% of expenditures were related to public protection services (Mariposa County 2010).

The total property tax base for the county in 2009-2010 was \$2.1 billion dollars, an increase of almost 2% from the previous year (CBOE 2009a).

Total taxable sales for Mariposa County were \$171 million in 2008, an increase of 2.3% from 2007 (CBOE 2009b). Retail store sales accounted for 36% of total taxable sales. Of retail sales, food stores accounted for 20% of total sales and eating and drinking places accounted for 19% of sales (CBOE 2009c).

Visitor-generated tax receipts were estimated at over 90% of county receipts from local sales taxes and Transient Occupancy Taxes in 2008 (Dean Runyan Associates 2010). Travel spending in Mariposa County has increased 69% from \$184.4 million in 1992 to \$311.6 million in 2008. Almost 37% of visitor spending was related to accommodations and another 29% was related to food and beverage services. Another 16% was spent on arts, entertainment, and recreation and 13% on retail sales. The remainder was spent on transportation and food stores. Transient Occupancy Taxes receipts for Mariposa County increased from \$6 million in 1999 to \$9.7 million in 2009, an increase of 62%.

Visitor Levels/Spending

A study of travel spending impacts was completed for California in 2009 (Dean Runyan Associates 2010). The study evaluated travel expenditures at the point of sale, employment, and earnings associated with travel expenditures and local and state traveler-related tax receipts. The study documents \$87.7 billion of direct travel spending in California in 2009, which was a decrease of 10% from 2008 in current dollars. Travel spending is estimated to have supported 881,000 jobs with earnings of \$30 billion. Approximately 57% of those jobs were in accommodations and food service; another 25% were in arts, entertainment, and recreation. Travel spending generated \$10.3 billion in tax receipts in 2009, including \$1.9 billion of local tax revenues.

Visitor spending generated over \$24 million in local sales tax receipts in the region in 2008. Travel spending was greatest in Mono and Mariposa Counties. Travel spending is estimated to have supported 13,580 jobs in the region in 2008. The employment generated by travel spending accounts for 76% of total wage and salary employment in Mariposa County.

The National Park Service recently issued a study on the impact of Yosemite National Park visitor spending on the economy within 50 miles of the park (Stynes 2007). The study found that park visitors spent a total of \$255 million in 2005. Over 65% of this, or \$147 million, was spent outside the park but within a 50-mile radius of the park. Over 50% of visitor spending was on accommodations; another 22% was spent in restaurants and bars. Park visitor spending in the

region supported 5,281 jobs and resulted in \$124.6 million in personal income, when direct and indirect economic impacts are considered. Although most park visitors indicated that visiting the park was their primary objective for visiting the area, some visitors indicated that they would have visited the area in any event. Thus, the study estimates that only 90% of the impact from visitor spending should be considered to have been generated due to the park.

Spending by visitor parties varies significantly between day-use visitors and overnight visitors, primarily due to the significance of lodging costs for overnight visitors. The average visitor spending by day use parties in 2005 was \$71 compared to an average of \$394 for all visitor parties (Stynes 2007). Day use visitor parties spent 55% of this total within the park and 45% in the communities outside the park but within 50 miles. Overnight visitors who stayed in the park spent 12-22% in the communities outside the park, while overnight visitors who stayed outside the park spent 68-89% in these communities.

National Park Service Spending

Yosemite National Park employed 710 people in 2005 and had a total payroll of \$35.2 million (Stynes 2007). A 2007 study estimates that the 2005 park employment and payroll supported an additional 1,000 jobs in the region. Park employment also increased personal income by \$42 million in the region.

The Ahwahnee Operations

The park concessioner operates visitor services in the park, including The Ahwahnee hotel and associated facilities. The Ahwahnee includes 99 hotel rooms and 24 guest cottages. The occupancy rate is high year-round, with peak park visitation in the summer and for special events (such the Bracebridge dinners, Chef's Holiday, and Vintners Holiday) in the fall, winter, and spring. These special events have a high rate of return visitors each year and contribute a substantial portion of the overall revenues for The Ahwahnee. In addition to serving overnight guests, meals and retail services are provided to a high number of day visitors throughout the year. The hotel also hosts other events, such as weddings and conferences. The Ahwahnee is staffed 24 hours per day, but the day shift has more employees than the overnight shift. Most employees work year-round but work fewer hours in the off-peak season, typically February and March. Many of the concessioner employees at The Ahwahnee are long-term employees who have been employed there for over 10 years. Some concessioner employee housing is provided in Yosemite Valley, but many employees live outside Yosemite Valley and commute to work.

Although specific revenues generated by The Ahwahnee are confidential, revenues from The Ahwahnee operations are known to make up a significant income source for the park. In addition, Transient Occupancy Taxes and sales taxes generated at The Ahwahnee make up a significant portion of total Transient Occupancy Taxes and sales taxes for the county, which depends heavily on these revenue sources for general government funding.

Environmental Consequences Methodology

The socioeconomics section evaluates potential effects on the social environment, visitor populations, the local economy, and the park and its primary concessioner. Social and economic environments are primarily affected by changes in visitor levels, visitor spending, park and concessioner employment, and park and concessioner spending in the economy. The action alternatives were reviewed to determine how they would affect these factors. Construction activities related to the improvements included in each alternative would likely require short-term disruption of visitor services, including lodging, temporary reductions in the numbers of

rooms available, and temporary closures of other services (gift shops, restaurants, and bars) that could reduce visitation to the park and/or visitor spending in the park. Due to the uncertainties related to the timing of project implementation, the analysis of effects was qualitative, and professional judgment was applied to reach reasonable conclusions as to the context, intensity, and duration of potential impacts.

Visitor Population and Spending

This analysis identifies potential changes in park visitor levels and visitor spending that could result from implementation of the alternatives. This section describes possible changes in the number of rooms and other visitor services and how that might result in potential changes in visitor spending.

Concessioner and Park Revenues

This analysis identifies potential changes in revenues to the concessioner, and related changes in revenues to the park from the concessioner, resulting from the implementation of the various alternatives. Changes in revenues are addressed qualitatively, based on changes in the level of visitor services provided as well as possible disruptions of sales and services based on construction activities.

Concessioner Employment and Spending

This analysis identifies potential changes in concessioner employment and spending for operations at The Ahwahnee. Concessioner information on employment and spending is addressed qualitatively due to confidentiality requirements related to the concession contract.

Local and Regional Economy

The analysis identifies how potential changes to the hotel under each alternative would affect the potential for increased or decreased employment and wages. This section also addresses potential changes in employment and wages associated with the construction expenditures associated with each alternative. Those local economies most dependent on concessioner employment and wages and visitor spending are identified where relevant.

Mariposa County Tax Revenues

This analysis identifies potential changes in tax revenues to Mariposa County from implementation of the proposed alternatives. Changes in revenues are addressed qualitatively, based on changes in the amount of lodging available and changes in other visitor services provided at The Ahwahnee hotel.

Impact Assessment

Proposed actions under each alternative are evaluated in terms of the context, intensity, and duration of the socioeconomic impacts, and whether the impacts are considered to be beneficial or adverse to the socioeconomic environment.

Context: The context of the impact considers whether the impact would be local or regional. For the purposes of this analysis, local impacts would be those that occur within Yosemite National Park and Mariposa County. Regional impacts are not expected.

Intensity: The intensity of the impact considers whether the impact would be negligible, minor, moderate, or major. Negligible impacts are effects that are considered not detectable or to affect

spending, employment, or wages by less than one percent. Minor impacts are effects on the socioeconomic environment that would be detectable but would not be expected to have a substantive overall effect, or would affect spending, employment, or wages by less than 5 percent. Moderate impacts would be clearly detectable and could have an appreciable effect, or would affect spending, employment or wages by between 5 and 10 percent. Major impacts would have a substantial, highly noticeable, and lasting influence on the socioeconomic environment, or would affect spending, employment or wages by more than 10 percent.

Duration: The duration of the impact considers whether the impact would occur in the short term or the long term. A short-term impact would be temporary in duration and associated with transitional types of activities. A long-term impact would have a permanent effect on the socioeconomic environment.

Type: Impacts are evaluated in terms of whether the impact would be beneficial or adverse to the socioeconomic environment. Beneficial socioeconomic impacts would improve the social or economic conditions in the park or in the affected region. These would typically be associated with an increase in revenues, employment, and/or wages. Adverse socioeconomic impacts would negatively alter social or economic conditions in the park or in the affected region, or would affect low-income populations. Adverse effects would typically be associated with decreases in revenues, employment, and/or wages.

Environmental Consequences of the No Action Alternative

Analysis

The No Action Alternative would not result in any short-term or long-term changes in the availability of visitor services or lodging and therefore would not impact visitor spending or concessioner revenues. Revenues to the park and Mariposa County would not be impacted.

Conclusion: The No Action Alternative would not impact local or regional employment or wages. There would be no impact on Mariposa County tax revenues.

Cumulative Impacts

Many of the recent and current remediation actions in and around The Ahwahnee (such as the *East Yosemite Valley Utilities Improvement Plan*, *The Ahwahnee Fire and Life Safety Improvements Project*, *The Ahwahnee Hotel Improve Porte Cochere Access Walkways and Fence Project*, *The Ahwahnee Hotel Replace Crawl Space Utilities Project*, *Parkwide Rehabilitate Concessioner Operated Fireplaces Project*, and *The Ahwahnee- Stabilize Kitchen Floor Project*) have had a moderate beneficial impact on the local economy through construction spending and employment. The actions required temporary closures of some facilities offsetting the beneficial cumulative impacts and resulting in short-term moderate adverse impacts on spending in the park while the facilities were closed.

The *Merced Wild and Scenic River Comprehensive Management Plan* is under development and its impacts are difficult to anticipate. If the plan were to reduce park visitor capacity this could have a long-term major impact on spending within the park and the region because it would reduce the number of visitors to the park. This would in turn impact local and regional employment, which would have secondary output impacts throughout the region.

The overall impact of the cumulative projects is anticipated to be negligible to minor and beneficial to the local and regional economy and negligible to the social environment. This

cumulative analysis assumes that the *Merced River Wild and Scenic River Comprehensive Management Plan* would not result in a substantive reduction in park visitor capacity.

Environmental Consequences of Alternative 1

Visitor Population and Spending

Implementation of Alternative 1 would require the short-term closure of some guestrooms to complete some of the proposed improvements, such as the replacement of windows and toilets. Phasing of these improvements has not been finalized at this time, but it is assumed that the number of rooms closed for improvements would be limited to the minimum required at any one time and that the duration of the closures would be minimized. The reduction in available guestrooms would be expected to reduce visitor spending in the short-term while the rooms are closed. Similarly, other improvements in the Dining Room, Ahwahnee Bar, and Gift Shop might result in some temporary closures during certain construction activities and reduce visitor spending on these services.

Although the National Park Service does not expect the short-term closure of some guestrooms and other visitor services to result in a detectable change in overall park visitation, it might result in a negligible to minor decrease in visitor spending in the park as visitors substitute other less expensive lodging and services for those normally obtained at The Ahwahnee hotel. The loss of two guestrooms would result in a minor decrease in visitor spending because any guests displaced from these rooms are likely to spend less on lodging at other facilities in the area.

Concessioner and Park Revenues

Revenues to the concessioner would be reduced in the short-term based on the temporary reduction in lodging and other visitor services being provided, as described above. Since concessioner payments to the park are related to concessioner revenues, this would result in a reduction in concessioner revenues to the park. The long-term loss of two standard guestrooms would not be expected to result in a long-term decrease in concessioner and park revenues because the proposed conversion of four standard rooms to two guestroom suites would result in approximately the same revenue to the concessioner.

Concessioner Employment and Wages

The vast majority of the changes in visitor services provided are expected to be short-term in nature. Given that the facility improvements would be implemented in a phased manner over a period of up to 20 years, the disruption of facilities and services is expected to be minimized to the greatest extent possible. Therefore, changes in the level of concessioner employment and wages are expected to be minimal and short-term in nature. In the long-term, only two standard guestrooms would be permanently lost, which would have a negligible effect on local and regional employment and wages. No long-term impacts on employment or wages are anticipated related to food and beverage or retail services.

Local and Regional Economy

Impacts to regional employment and wages in both the short term and long term would be negligible. The Ahwahnee hotel is located in Mariposa County, and a majority of the concessioner employees live in the county. Mariposa County is also highly dependent on the visitor industry for employment and tax revenues. Therefore, it is likely that any economic effects from

implementation of the alternative (changes in employment and wages) would be felt most strongly by Mariposa County.

Alternative 1 is expected to result in construction spending of \$45 million over a period of about 20 years, or an average of approximately \$2.25 million per year. These construction expenditures are anticipated to result in approximately 20 direct full-time equivalent jobs each year and 12 indirect jobs (SRRI 2009). The impact on the state economy from the injection of \$2.25 million in construction spending each year is anticipated to result in an increase of \$5.2 million in the total output of the state economy and an increase of \$1.7 million in total earnings in the state (U.S. Bureau of Economic Analysis 2002). Because the multipliers used to generate these numbers is for the state of California as a whole, the economic impacts on the region in terms of employment and spending would likely be less because many construction workers might come from outside of the region and spend their earnings in other areas of the state. If half of the employment generated in the state were generated in Mariposa County, the economic area most closely affected by employment in the park, then it would still account for less than 1 percent of the county's employment.

The temporary closure of guestrooms during various construction activities would reduce Transient Occupancy Taxes revenues to the county during periods when guestrooms are temporarily closed. The extent of this impact would depend on the number of rooms closed, the duration of the closure, and to some degree, the timing of the closure. It is assumed that guestroom closures would be scheduled during the off-season, when vacancy rates are somewhat lower. It is also assumed that only a small number of rooms would be closed at any one time and that they would be closed for a short period of time. Therefore, the short-term effects on Mariposa County tax revenues over the implementation period would be mitigated to the extent possible. The permanent loss of two guestrooms would have a long-term, negligible adverse impact on county Transient Occupancy Taxes revenues because the lost revenue from two standard rooms would be offset by the addition of two ADA-compliant guestroom suites.

Conclusion: Under Alternative 1, visitor populations are not likely to be impacted and visitor spending displaced from lodging or other services at The Ahwahnee is likely to be captured at other establishments in the region. Therefore, the impact on visitor spending in both the local and regional economy would be negligible. Concessioner and park revenues would be reduced to some extent during the closure of various facilities and services. The impacts on concessioner and park revenues could be negligible to moderate, depending on construction phasing. Short-term decreases in concessioner employment and/or wages would likely be more than offset by the short-term increases in construction employment and wages, resulting in a short-term, beneficial impact on the local and regional economies. Impacts on Mariposa County could be minor to major and adverse in the short term, depending on the extent of guestroom closures (number of guestrooms and duration) over the 20-year implementation period. Long-term impacts on Mariposa County Transient Occupancy Taxes revenues would be negligible and adverse with the permanent loss of two standard guestrooms (the lost revenue would be offset by the conversion of four standard rooms to two accessible guestroom suites).

Cumulative Impacts

The list of cumulative plans and projects evaluated under Alternative 1 are the same as listed under the No Action Alternative. The moderate beneficial impacts of the cumulative projects in the regional economy would be somewhat offset by the temporary lodging and facility closures. It is anticipated that many visitors might choose to simply move their business to a different facility,

with the region still benefiting from their spending. Therefore, cumulative actions in combination with Alternative 1 would likely result in local and regional, short-term, negligible to minor, beneficial impacts on the economy. Long-term, local impacts are expected to be negligible to minor and adverse due to the loss of two guestrooms. This cumulative analysis assumes that the upcoming *Merced River Wild and Scenic River Comprehensive Management Plan* would not result in a substantive reduction in park visitor capacity.

Environmental Consequences of Alternative 2

Visitor Population and Spending

Implementation of Alternative 2 would require the short-term closure of some guestrooms to complete some of the proposed improvements, such as the replacement of windows and toilets. Phasing of these improvements has not been finalized at this time, but it is assumed that the number of rooms closed for improvements would be limited to the minimum required at any one time, and that the duration of the closures would be minimized. The reduction in available guestrooms would reduce visitor spending in the short-term while the rooms are closed. Similarly, other improvements in the Dining Room, Ahwahnee Bar, and Gift Shop would result in some temporary closures during certain construction activities and reduce visitor spending on these services.

Although the National Park Service does not anticipate that the short-term closure of some guestrooms and other visitor services would result in a detectable change in overall park visitation, it might result in a negligible to minor decrease in visitor spending in the park as visitors substitute other, less expensive lodging and services for those normally obtained at The Ahwahnee hotel. No long-term impacts on visitor population or spending would occur related to the room or facility closures.

Concessioner and Park Revenues

Revenues to the concessioner would be reduced in the short-term, based on the temporary reduction in lodging and other visitor services being provided, as described above. Since concessioner payments to the park are related to concessioner revenues, this would result in a reduction in concessioner revenues to the park. The long-term loss of one standard guestroom would not be expected to result in a long-term decrease in concessioner and park revenues because the proposed conversion of two standard rooms to a guestroom suite would result in approximately the same revenue to the concessioner.

Concessioner Employment and Wages

The vast majority of the changes in visitor services provided would be short term in nature. Given that the facility improvements would be implemented in a phased manner over a period of up to 20 years, the disruption of facilities and services is expected to be minimized to the greatest extent possible. Therefore, changes in the level of concessioner employment and wages are expected to be minimal and short term in nature. In the long-term, only one standard guestroom would be permanently lost, which would have a negligible impact on local and regional employment and wages. No long-term impacts on employment or wages would be anticipated related to food and beverage or retail services.

Local and Regional Economy

Impacts on regional employment and wages in both the short term and long term would be negligible. The Ahwahnee hotel is located in Mariposa County and a majority of the concessioner employees live in the county. Mariposa County is also highly dependent on the visitor industry for employment and tax revenues. Therefore, it is likely that any economic impacts from implementation of the alternative (changes in employment and wages) would be felt most strongly by Mariposa County.

Alternative 2 is expected to result in construction spending of \$68 million over a period of 20 years or an average of approximately \$3.40 million per year. These construction expenditures would result in an average of 30 direct jobs each year and 18 indirect jobs (SRRI 2009). The impact on the state economy from the injection of \$3.40 million in construction spending each year would result in a \$7.8 million increase in total state output and a \$2.6 million increase in total earnings in the state (U.S. Bureau of Economic Analysis 2002). Again, the economic impacts to the region in terms of employment and spending would likely be less because many construction workers might come from outside of the region and spend their earnings in other areas of the state. If half of the employment generated in the state were generated in Mariposa County, the economic area most closely affected by employment in the park, it would still account for less than 1 percent of the county's employment.

The temporary closure of guestrooms during various construction activities would reduce Transient Occupancy Taxes revenues to the county during periods when guestrooms are temporarily closed. The extent of this impact would depend on the number of rooms closed, the duration of the closure, and to some degree, the timing of the closure. It is assumed that guestroom closures would be scheduled during the off-season, when vacancy rates are somewhat lower. It is also assumed that only a small number of rooms would be closed at any one time and that they would be closed for a short period of time. Therefore, the short-term impacts on Mariposa County tax revenues over the implementation period would be mitigated to the extent possible. The permanent loss of one guestroom would have a long-term, negligible, adverse impact on county Transient Occupancy Taxes revenues because the lost revenue from the standard room would be offset by the addition of one ADA-compliant guestroom suite.

Conclusion: Under Alternative 2, visitor populations are not likely to be impacted, and visitor spending displaced from lodging or other services at The Ahwahnee is likely to be captured at other establishments in the region. Therefore, the impact on visitor spending in both the local and regional economy would be negligible. Concessioner and park revenues would be reduced to some extent during the closure of various facilities and services. The impacts on concessioner and park revenues could be negligible to moderate, depending on construction phasing. Short-term decreases in concessioner employment and/or wages would likely be more than offset by the short-term increases in construction employment and wages, resulting in a short-term, beneficial impact on the local and regional economies. Impacts on Mariposa County could be minor to moderate and adverse in the short term, depending on the extent of guestroom closures (number of guestrooms and duration) over the 20-year implementation period. Long-term impacts on Mariposa County Transient Occupancy Taxes revenues are anticipated to be negligible with the permanent loss of one standard guestroom (the loss would be offset by the conversion of two standard rooms into one accessible guestroom suite).

Cumulative Impacts

The moderate, beneficial impacts of the cumulative projects in the regional economy would likely be somewhat offset by the temporary lodging and facility closures. It is anticipated that many visitors might choose to simply move their business to a different facility, with the region still benefiting from their spending. Therefore, cumulative actions with Alternative 2 would likely result in local and regional, short-term, negligible to minor, beneficial impacts on the economy. Long-term, local impacts are expected to be negligible to both the regional and local economy. This cumulative analysis assumes that the *Merced River Wild and Scenic River Comprehensive Management Plan* would not result in a substantive reduction in park visitor capacity.

Environmental Consequences of Alternative 3

Visitor Population and Spending

Implementation of Alternative 3 would require the short-term closure of some guestrooms to complete some of the proposed improvements, as described previously. Phasing of these improvements has not been finalized at this time, but it is assumed that the number of rooms closed for improvements would be limited to the minimum required at any one time, and that the duration of the closures would be minimized. The reduction in available guestrooms would reduce visitor spending in the short-term while the rooms are closed. Similarly, other improvements in the Dining Room, Ahwahnee Bar, and Gift Shop might result in some temporary closures during certain construction activities and reduce visitor spending on these services. Egress improvements between the ground and first floor would result in the permanent loss of two standard guestrooms. Although the short-term closure of some guestrooms and other visitor services would not result in a detectable change in overall park visitation, it might result in a negligible to minor decrease in visitor spending in the park as visitors substitute other, less expensive lodging and services for those normally obtained at The Ahwahnee hotel. The long-term closure of two guestrooms would result in a minor decrease in visitor spending because any guests displaced from these rooms are likely to spend less on lodging at other facilities in the area.

Concessioner and Park Revenues

Revenues to the concessioner would be reduced in the short-term based on the temporary reduction in lodging and other visitor services being provided, as described above. Since concessioner payments to the park are related to concessioner revenues, this would result in a reduction in concessioner revenues to the park. Similarly, the long-term loss of two guestrooms would result in a long-term decrease in concessioner and park revenues. This impact of this would be minor.

Concessioner Employment and Wages

The vast majority of the changes in visitor services provided are expected to be short term in nature. Given that facility improvements would be implemented in a phased manner over a period of up to 20 years, the disruption of facilities and services would be minimized to the greatest extent possible. Therefore, changes in the level of concessioner employment and wages would be minimal and short term in nature. In the long term, only two guestrooms would be permanently lost, which would have a negligible impact on local and regional employment and wages. No long-term impacts on employment or wages would be anticipated related to food and beverage or retail services.

Local and Regional Economy

Impacts on regional employment and wages in both the short term and long term would be negligible. The Ahwahnee hotel is located in Mariposa County, and a majority of the concessioner employees live in the county. Mariposa County is also highly dependent on the visitor industry for employment and tax revenues. Therefore, it is likely that any economic impacts from implementation of the alternative (changes in employment and wages) would be felt most strongly by Mariposa County.

Alternative 3 is expected to result in construction spending of \$52 million over a period of about 20 years, or an average of approximately \$2.6 million per year. These construction expenditures would result in approximately 23 direct full-time equivalent jobs each year and 14 indirect jobs (SRRI 2009). The impact on the state economy is estimated at an increase of \$6 million in total state output and an increase of \$2 million in total earnings (U.S. Bureau of Economic Analysis 2002). Again, the economic impacts on the region in terms of employment and spending would likely be less than the impact on the state overall. If half of the employment generated in the state were generated in Mariposa County, the economic area most closely affected by employment in the park, it would still account for less than 1 percent of the county's employment.

The temporary closure of guestrooms during various construction activities would reduce Transient Occupancy Taxes revenues to the county during periods when guestrooms are temporarily closed. The extent of this impact would depend on the number of rooms closed, the duration of the closure, and to some degree, the timing of the closure. It is assumed that guestroom closures would be scheduled during the off-season, when vacancy rates are somewhat lower. It is also assumed that only a small number of rooms would be closed at any one time and that they would be closed for a short period of time. Therefore, the short-term impacts on Mariposa County tax revenues over the implementation period would be mitigated to the extent possible. The permanent loss of two guestrooms would have a long-term, minor, negligible impact on county Transient Occupancy Taxes revenues.

Conclusion: Under Alternative 3, visitor populations are not likely to be impacted, and visitor spending displaced from lodging or other services at The Ahwahnee is likely to be captured at other establishments in the region. Therefore, the impact on visitor spending in both the local and regional economy would be negligible. Concessioner and park revenues would be reduced to some extent during the closure of various facilities and services. The impacts on concessioner and park revenues could be negligible to moderate, depending on construction phasing. Short-term decreases in concessioner employment and/or wages would likely be more than offset by the short-term increases in construction employment and wages, resulting in a short-term, beneficial impact on the local and regional economies. Impacts on Mariposa County could be minor to major and adverse in the short term, depending on the extent of guestroom closures (number of guestrooms and duration) over the 20-year implementation period. Long-term impacts on Mariposa County Transient Occupancy Taxes revenues would be negligible and adverse with the permanent loss of two standard guestrooms (the loss would be offset by the conversion of four standard rooms to two accessible guestroom suites).

Cumulative Impacts

The moderate beneficial impacts of the cumulative projects in the regional economy would likely be somewhat offset by the temporary lodging and facility closures. It is anticipated that many visitors might choose to simply move their business to a different facility, with the region still benefiting from their spending. Therefore, cumulative actions with Alternative 3 would likely

result in local and regional, short-term, negligible to minor, beneficial impacts on the economy. Long-term, local impacts would be negligible to minor and adverse due to the loss of two guestrooms. This cumulative analysis assumes that the *Merced River Wild and Scenic River Comprehensive Management Plan* would not result in a substantive reduction in park visitor capacity.

Energy Consumption and Climate Change

Affected Environment

Regulations, Policies, and Planning Objectives

There are a great number of federal, park, and state policies that address the need to design and operate facilities in a manner that minimizes energy consumption and carbon emissions and maximizes the use of renewable energy sources. In particular, Executive Order 13123 calls on federal agencies to take the lead in implementing energy conservation, maximizing the use of renewable resources, and reducing greenhouse gas emissions by setting goals for reduced energy consumption by federal agencies. The National Park Service has incorporated requirements for energy efficiency into its management policies for design, construction, and operation of park facilities.

In recent years, the National Park Service has hosted or participated in a series of regional and interagency workshops to explore climate change impacts and coping strategies. The National Park Service initiated the Climate Friendly Parks Program in 2004 to promote sustainable operations in parks and create climate action plans to reduce greenhouse gas emissions; almost 60 parks now participate. The National Park Service has also formed a system-wide Climate Change Response Steering Committee to foster communications, provide recommendations, and serve as an advisory body to National Park Service leadership on this issue.

Yosemite National Park Climate Action Plan

Yosemite National Park participates in the Climate Friendly Parks Program and has been designated a “Climate Friendly Park.” To obtain this designation, Yosemite has conducted a baseline greenhouse gas emissions inventory; developed a Climate Action Plan; and committed to educating park staff, visitors, and community members about climate change. The objective of the Climate Action Plan is to identify actions that Yosemite can undertake to reduce greenhouse gas emissions and thus address climate change. The plan recommends three strategies: reducing fuel use and greenhouse gas emissions, increasing climate change outreach and education efforts and performing subsequent emission inventories to evaluate progress, and developing future emission mitigation actions.

Energy Consumption

Energy consumption at The Ahwahnee hotel occurs year-round. The hotel has a central plant for generating chilled water, steam, and space-heating hot water. The chilled water system was installed in approximately 1990; the refrigerant used is R-22. Steam is generated in The Ahwahnee basement by two oil-fired boilers installed in the mid-1980s. The steam feeds heat exchangers that generate space-heating hot water, domestic hot water, and direct steam-fired radiators in The Ahwahnee public spaces. Hot water is distributed to the guestrooms, the Dining Room, Gift Shop, Sweet Shop, and bathrooms. The cottages have electric wall heaters, and the dormitory has a forced air heating system.

The energy consumption numbers listed below include operations at The Ahwahnee hotel and associated concessioner operated buildings. The average annual energy consumption by the concessioner from 2003 to 2007 includes the following:

- Electricity - 1,717,715 kWh. The facility is currently fed from the medium-voltage Yosemite Valley feeder system to two service transformers in the Kitchen and the basement at The Ahwahnee hotel.
- Propane - 40,950 gallons. Liquefied petroleum gas (LPG) tanks are located approximately halfway between the northwest corner of The Ahwahnee and the Employee Dormitory. These tanks feed the Kitchen of The Ahwahnee and the Employee Dormitory.
- Heating fuel - 185,523 gallons. A large underground oil tank in the service yard feeds The Ahwahnee boilers.
- Water - 26,427,344 gallons. Water is supplied to the facility by the National Park Service.
- Sewer - 26,392,487 gallons. The sanitary sewer system connects to the sewer main that extends to a waste water treatment plant located in El Portal and operated by the National Park Service.

Environmental Consequences - Methodology

There is no clear consensus in the scientific community regarding the sources or causes of climate change, and there is limited guidance available on how to properly analyze the impact of local development projects on climate change. This is particularly true where the project is unlikely to result in large changes in local or regional emissions. This evaluation includes an assessment of changes in energy consumed and related levels of direct and indirect greenhouse gas emissions.

Context: The context of the impact considers whether the impact would be local, regional, national, or global. For the purposes of this analysis, local impacts would pertain to energy consumption within Yosemite National Park or specific to The Ahwahnee hotel.

Intensity: The intensity of the impact considers whether the impact would be negligible, minor, moderate, or major. Negligible impacts are impacts considered not detectable and that would have no discernible impact on the amount of energy consumed or the amount of emissions. Minor impacts are impacts that would be slightly detectable but would not be expected to have an overall impact on those conditions. Moderate impacts would be clearly detectable and could have an appreciable impact on energy use or emissions. Major impacts would have a substantial, highly noticeable influence on and could permanently alter those conditions.

Duration: The duration of the impact considers whether the impact would occur in the short term or long term. A short-term impact would be temporary in duration and be associated with transitional types of activities, such as construction. A long-term impact would have a protracted or permanent impact on energy use or emissions.

Type: Impacts were evaluated in terms of whether they would be beneficial or adverse in terms of energy consumption and climate change. Beneficial impacts would reduce energy consumption or reduce emissions. Adverse impacts would increase energy consumption or increase emissions.

Environmental Consequences of the No Action Alternative

Analysis

Under the No Action Alternative, existing hotel facilities would remain in operation as described in Chapter 2. No upgrades would occur to outdated heating and cooling systems. Inefficient

windows, inadequate insulation, and unsealed doors would remain. Energy use and emissions would stay at or near current levels.

Conclusion: Under the No Action Alternative, there would be little or no change to energy use and emissions, resulting in a local, long-term, negligible, adverse impact on energy consumption.

Cumulative Impacts

Many of the current actions taking place in and around The Ahwahnee hotel might result in short-term increases in fuel and emissions during construction. These include the *East Yosemite Valley Utilities Improvement Plan*, *The Ahwahnee Fire and Life Safety Improvements* project, and *The Ahwahnee Hotel Improve Porte Cochere Access Walkways and Fence*. The *Merced Wild and Scenic River Comprehensive Management Plan* is under development and its impacts on energy consumption are therefore difficult to anticipate.

Although the impacts of the No Action Alternative would remain locally adverse, the level of emissions overall in this area would be negligible in a regional or larger perspective. The National Park Service will continue to work toward overall reductions in energy consumption and greenhouse gas emissions to reduce park impacts on global climate change.

Environmental Consequences of Alternative 1, 2, and 3

The difference among the action alternatives with regard to impacts on energy consumption and climate change would be negligible; minor exceptions are noted. Therefore, the action alternatives are analyzed together.

Analysis

One of the National Park Service management objectives for park operations is to upgrade facilities and utility systems to conserve energy. Accordingly, design techniques and the application of new technology to reduce energy and water consumption have been incorporated into *The Ahwahnee Comprehensive Rehabilitation Plan*. The facility upgrades proposed under all action alternatives would reduce the overall use of energy by replacing inefficient windows, upgrading plumbing throughout the facility with low-flow fixtures, adding insulation, and completely replacing outdated heating and cooling systems to optimize operation of all heating, ventilation, and air conditioning systems.

Alternatives 1 and 3 would use high-efficiency, oil-fired boilers for steam heating. Kitchen equipment would be refurbished and reused whenever possible. Alternative 2 would offer additional reductions in emissions with the use of alternative energy to supplement high-efficiency propane boilers for hot water heating. Proposed dimming switches would allow the shutdown of heating, ventilation, and air conditioning (HVAC) and lighting systems at sections of the building that are unoccupied when the hotel is not full. All kitchen equipment would also be replaced with more efficient models under Alternative 2.

Short-term increases in fuel and emissions would occur during construction of any of the action alternatives.

Conclusion: Under Alternatives 1, 2, or 3, improved efficiency and reduced energy use would result in a local, long-term, minor to moderate, beneficial impact on overall energy consumption and resulting emissions at The Ahwahnee hotel and a regional, long-term, negligible, beneficial impact on energy consumption and climate change.

Cumulative Impacts

Many of the recent actions in and around The Ahwahnee hotel resulted in short-term increases in fuel and emissions during construction. These include the *East Yosemite Valley Utilities Improvement Plan* and *The Ahwahnee Fire and Life Safety Improvements*, *The Ahwahnee Hotel Improve Porte Cochere Access Walkways and Fence* projects and others. The *Merced Wild and Scenic River Comprehensive Management Plan* is under development and its impacts on energy consumption are therefore difficult to anticipate.

The impacts of the proposed rehabilitation project under Alternatives 1, 2, or 3 would be locally beneficial; however, the level of emissions overall from this facility would be negligible in a regional or larger perspective. The National Park Service will continue to work toward overall reductions in energy consumption and greenhouse gas emissions to reduce park impacts on global climate change.

Historic Properties

Historic Sites, Buildings, and Landscapes

Affected Environment

The Ahwahnee is located on a 35-acre site near the east end of Yosemite Valley at the base of the Royal Arches formation, north of the Merced River. The Ahwahnee historic site includes the main hotel building, eight guest cottages, a maintenance building, an employee dormitory, and a relatively recent mechanical building. The historic site boundary encompasses all of the historically significant features within The Ahwahnee area. As defined under section 106 of the National Historic Preservation Act, the area of potential affect (APE) for this project comprises The Ahwahnee hotel, its ancillary structures, and the area immediately surrounding these buildings (see Appendix A, Attachment A).

Significance of The Ahwahnee

The Ahwahnee was originally listed on the National Register of Historic Places (NRHP) in 1977 and was designated a National Historic Landmark (NHL) in 1987 for its significance in architecture.

National Register of Historic Places Eligibility Criteria

The criteria of the National Register of Historic Places provide the basis under which a structure, site, building, district, or object can be considered significant for listing on the National Register. A potential resource needs to meet only one of the four criteria to achieve significance. The criteria include resources that:

- (A) are associated with events that have made a significant contribution to the broad patterns of history; or
- (B) are associated with the lives of persons significant in our past; or
- (C) embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (D) have yielded or may likely yield information important in prehistory or history.

Previous Evaluations of Significance

The Ahwahnee's significance was originally documented in a 1977 NRHP nomination form and was updated in a 1987 NHL nomination form. The Ahwahnee was also included as part of the Yosemite Valley Historic District NRHP nomination form in 2006. A summary of previous National Register nominations is provided as Table 3-4.

Table 3-4
Summary of Previous National Register Nominations for The Ahwahnee

Nomination	Date of Listing	Significance Level	Significance Criteria	Period of Significance	Contributing Resources Documented in Nomination
National Register of Historic Places	1977	National	C	1925-1927	The Ahwahnee hotel, exterior, interior, and ancillary buildings
National Historic Landmark	1987	National and Regional	C	1925-present	The Ahwahnee hotel exterior, hotel interior, meadow, stone gate house, parking lots, pond, and walkways north of Porte Cochere
Yosemite Valley Historic District (as The Ahwahnee Developed Area)	2006	National	A,C	1855-1942 (entire district)	The Ahwahnee hotel, guest cottages, linen building, entry road, gate lodge and post, west parking area, pond, paths to guest cottages, footbridge to guest cottages, footbridge near Merced River, bridle trail ford, drainage ways, tennis courts, terrace
Yosemite Valley Archeological District	1978		D		Not disclosed

Source: Architectural Resources Group 2010

Current Statement of Significance

The following statements are excerpted from *The Ahwahnee Historic Structures Report* (HSR) (ARG 2011), which provides the current statement of significance for The Ahwahnee.

Built in 1927 and designed by architect Gilbert Stanley Underwood, The Ahwahnee is one of the nation's most acclaimed buildings and a National Historic Landmark. The Ahwahnee achieves high levels of significance under National Register criteria. Primarily significant for architectural merit, under National Register criterion C, The Ahwahnee is considered one of the greatest of the national park lodges. Architecturally, it is a symbol of design excellence, 1920s architectural ideals, and Rustic style architecture on a previously unimagined scale.

Potential Significance of The Ahwahnee under Criterion A

Historically, The Ahwahnee is significant for its role in the development of tourism, national parks, and the concessions industry and for American citizens' then-emerging appreciation of the National Park System and the great outdoors. The Ahwahnee is significant for its stature among the great lodges of the West and as a representation of the developing resorts that attracted wealthy visitors in the country's new National Park System.

Potential Significance of The Ahwahnee under Criterion B

Although not designated for significance under Criterion B, The Ahwahnee is associated with numerous nationally renowned Americans who made great contributions in their fields; landscape architect Frederick Law Olmsted, Jr.; Steven T. Mather, first director of the National Park Service; and Horace Albright, the second director of the National Park Service.

Significance of The Ahwahnee under Criterion C

Primarily significant for architectural merit, under National Register Criterion C, The Ahwahnee is considered one of the greatest of the national park lodges. Previous designations, specifically

the National Historic Landmark nomination, note the Rustic monumentality of The Ahwahnee's architecture. Exhibiting indigenous materials and tenets of the Rustic style, but on a grand scale, The Ahwahnee is significant for its site, setting, materials, highest-quality design and artistic values, and craftsmanship.

Importance of The Ahwahnee Property under Criterion D

The Ahwahnee hotel facilities and associated built environment are not significant under Criterion D. However, important archeological features and sites are present in the vicinity of The Ahwahnee, and these resources are significant under Criterion D, as documented in the Yosemite Valley Archeological District nomination (1978).

Period of Significance

A building's period of significance is defined as the span of time in which a property attains the significance for which it meets the National Register criteria. The years 1925 to 1942 mark the period of significance of The Ahwahnee. The year 1925 corresponds to the initiation of the hotel's design and planning phase in addition to site selection. The end date of 1942 marks the year The Ahwahnee ceased to operate as a hotel and the beginning of the wartime use as a naval hospital.

By 1942, the design and construction of the hotel and grounds, which continued to be refined after the hotel's inauguration in 1927, were complete, representing the building's apex in terms of original design concept and integrity. Its site orientation and setting are crucial to The Ahwahnee's significance to the present time.

Contributing and Non-Contributing Structures in the Project Area

Information regarding contributing and non-contributing structures of The Ahwahnee has been extracted from the HSR (ARG 2011) and *The Ahwahnee Cultural Landscape Report* (AECOM and ARG 2011). See Appendix C for a complete list of the significance, historic integrity, and condition assessment classifications for features and spaces at The Ahwahnee.

Contributing Structures

The Ahwahnee Hotel

The dominant building in the project area is The Ahwahnee hotel. The hotel was constructed with a steel frame, reinforced concrete, and granite masonry. Three building wings form a Y shape—where the wings meet, the building is seven stories high. The central core of the building rises above the other wings and creates a tower of the fifth and sixth floors and the elevator penthouse.

The architect of The Ahwahnee, Gilbert Stanley Underwood, designed the exterior in what he called the "environmental" style. This style is now known as Rustic, Park Rustic, or Park Service Rustic. Because of the grand scale of The Ahwahnee, it is often described as "Monumental Rustic," meaning that it uses Rustic elements on a massive scale. Rustic architecture incorporated local natural materials, most notably stone and wood, and attempted to create buildings that blended with their natural setting and environment. Underwood specified that granite was to be placed with the weathered side to the exterior of the wall, so that the weathered walls would blend with the weathered granite cliffs surrounding the building.

Because of the history of hotels burning down in Yosemite, Stephen T. Mather insisted that The Ahwahnee be fireproof. In accordance, the exterior walls, rafter ends, and posts which look like wood were actually formed and stained concrete. The Dining Room, Porte Cochere, and

entrance walkway were the exception with their peeled log columns and trusses: a classic Rustic design element.

The large windows on the first floor provide views to the walls of Yosemite Valley. Balconies extend from each floor of the building to take advantage of the views. Concrete terraces, stamped to resemble flagstone, surround the hotel's east, south, and west sides; they are used as large, open sitting areas. Attached to the terraces on the east side of the hotel is an irregularly shaped concrete pool deck with a faceted scored pattern.

Guest Cottages

Across Royal Arch Creek from the hotel are eight single-story cottage buildings, divided into a total of twenty-four units, and one storage building. Designed by Eldridge T. Spencer, construction on the cottages was completed in 1928. The cottages are sited east of the hotel and are sheltered in a wooded enclave. The cabins are set apart from the main hotel building as they were historically. The apparently haphazard arrangement of the cottages may be a result of an attempt to maintain the privacy for each, as well as to situate the cottages within the existing grove of trees.

The cottages were designed in a contrasting style to the main hotel building. Although they incorporate a few Rustic elements, like the stone chimneys, they are not Rustic-style buildings. They are a style uniquely their own, which cannot be easily categorized into other known styles. Each cottage is a single-story, wood-framed structure on a concrete foundation. Although the plans and roof forms are simple, great care was taken in detailing the buildings, as is appropriate for a luxury hotel. Some of the key details include: the vertical and horizontal wood siding, the projecting windows, the wide stenciled door frames, refined exterior wood-molded trim at the projecting windows, decorative wood vents at the gables, wood signs at gables, and notched rafter tails. The details of each cottage vary slightly from the others: the notching at the rafter tails, the stencils at the doors, and the signs at the gables. The cottage interiors were simple, but elegant, with furniture, Persian rugs, and other furnishings similar to those used in the main building. The wood floors and walls tied them to their forest setting. The stencils in the cottages are abstracts of birds, insects, and flowers in contrast to the basket-inspired stencils in the main building.

Bridges

Stretching south of the hotel are several bridges crossing Royal Arch Creek. The bridges are constructed with abutments of stone or concrete. The design of the bridges, with their log construction, echoes the Rustic style of the hotel, though no one bridge is exactly like another.

Circulation

Other circulation features in the project area include sidewalks, flagstone paths, and unpaved paths. One path leaves the terraces from the eastern corner near the pool; this path is approximately 6 feet wide and paved with asphalt, and connects the hotel terrace to a bridge and the cottages beyond. A flagstone path set in earth connects the terrace south of the hotel to the meadow. A smaller flagstone path connects these two along the west bank of Royal Arch Creek.

Non-Contributing Structures

Employee Dormitory

Originally built by the Navy in 1943 as the Cooks and Supply Building, the building was moved to its current location and converted to employee housing in 1946 under the direction of Eldridge T. Spencer. The long, narrow, wood-framed, wood-sided structure is simple and utilitarian, which is a great contrast to the refined detailing of The Ahwahnee main building and cottages.

The wood-framed structure, located west of the hotel, is supported on concrete pier footings. A long corridor, extending almost the entire length of the building, divides the building in half. Employee rooms flank both sides of the corridor.

The dormitory exterior is horizontal wood siding, painted grey with an asphalt shingle roof. There are two doors on the north walls and one on the west wall. Each door opens onto a small wood deck and stairs. The main door has a ramp built over the stair. When the building was converted, it was designed to be a women's dorm, but it now houses some couples. Therefore, a small men's toilet room and a men's shower room have been added.

Character-Defining Features

A character-defining feature is an aspect of a building's design, construction, or detail that is representative of the building's function, type, or architectural style. Character-defining elements include the overall shape of the building, its materials, craftsmanship, decorative details, interior spaces and features, as well as the various aspects of its site and environment (NPS 1988). Generally, character-defining features date to a property's period of significance. For a historic resource to retain its significance, its character-defining features must be retained to the greatest extent possible.

The Ahwahnee hotel site includes character-defining features that contribute to the property's ability to convey its significant associations, as well as to all seven aspects of its integrity: location, design, setting, materials, workmanship, feeling, and association (see 'Integrity,' below). These characteristics include buildings and structures as well as spatial organization, land use, circulation related to the buildings and their interrelationships, topography, vegetation, and views and vistas. The overall spatial organization and land use patterns are defined by walkway(s) between the buildings and remain unchanged since the period of significance. Views of the dramatic architecture of The Ahwahnee and the beauty of the natural surroundings contribute to the site's historic setting.

With The Ahwahnee's significant spaces there may exist non-contributing individual elements (e.g., the Dining Room). Conversely, within altered and modified spaces there remain elements of historic importance (e.g., the Ahwahnee Bar). This is especially true in the public spaces on the ground floor. On the upper floors, guestrooms retain their original configuration with fairly uniform treatment of character-defining features throughout.

Integrity

Integrity is a key component of the overall building evaluation. For the National Register of Historic Places, integrity is the authenticity of an historical resource's physical identity, evidenced by the survival of characteristics that existed during the resource's period of significance. Integrity involves several aspects, including location, design, setting, materials, workmanship, feeling and association. These aspects closely relate to the resource's significance and should be primarily intact for designation. This discussion of integrity concentrates equally on the building's exterior envelope and interior. While the exterior has been subjected to many modifications over the years, the original exterior architectural expression remains intact. On the interior, original circulation patterns remain, though some room configurations have been modified.

The Ahwahnee hotel historic site includes a substantial amount of intact and significant features and characteristics from its period of significance. Despite growth and site maintenance, the site continues its original use and its landscape features have undergone few physical changes. Alterations that have occurred to The Ahwahnee hotel and its ancillary buildings and surrounding

landscape have not compromised the overall design and materials of the site. The site as a whole possesses integrity of location, design, setting, materials, workmanship, feeling, and association, and therefore retains sufficient integrity to convey its significance for the entire period of significance from 1925 to 1942.

Location

Location is the place where the historic property was constructed or the place where the historic event occurred. The main building, cottages and maintenance building are all in their original locations. The dormitory has been moved a short distance from the area of the parking lot, south to its current location. Although it has been moved, its close proximity to the original location has minimal impact on the integrity of the property. Therefore, The Ahwahnee has a high level integrity of location.

Design

Design is the combination of elements that create the form, plan, space, structure, and style of a property. The exterior of The Ahwahnee retains a high degree of the original design elements. In contrast to the Rustic style of the main hotel, the cottages are residential in design. Like the main hotel they retain a high degree of design integrity. The dormitory is a simple utilitarian building and also retains a high degree of design integrity. The greatest impact of the design integrity of all three types of structures is the replacement of the original wood windows with aluminum windows.

Setting

Setting is the physical environment of an historic property, constituting topographic features, vegetation, manmade features, and relationships between buildings or open space. The setting of The Ahwahnee at the west end of Yosemite Valley, under the Royal Arches formation, remains largely unchanged. Although there have been changes to the immediate site around the buildings, the integrity with regard to setting remains high.

Materials

Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form an historic property. At the time of construction, a great deal of care was used to select high quality materials and finishes for The Ahwahnee. The integrity of exterior materials has been reduced by the replacement of windows, roofs, balcony paving, rafter ends and lamp beams. The materials of the Porte Cochere and entrance walkway have been entirely replaced and therefore have no integrity with regard to materials.

The material integrity of the interiors have been reduced by the replacement of carpets, removal of much of the original furniture and some of the furnishings, replacement of plumbing fixtures, painting over of a substantial amount of original stenciled artwork, and replacement of other finishes. The overall integrity of materials is moderate. The cottage exterior materials have been altered by the replacement of the windows, the roofs, the patio paving and the replacement of the exterior doors. The interior materials have been altered with entirely new finishes in the bathrooms, replacement of the lighting fixtures, the removal of all original furnishings and the partial removal of the stencils. The cottages have a moderate integrity of materials. The dormitory exterior materials have been altered by the replacement of windows, doors and roofing. The dormitory interior materials have been slightly altered by the replacement of lighting and flooring. The overall material integrity of the dormitory is moderate.

Workmanship

Workmanship is the physical evidence of the crafts of a particular culture, people, or artisan during any given period in history or pre-history. Because of the reduction in the material integrity, the integrity of workmanship is also reduced. The covering over of about half of the original stenciled artwork in the public areas and guestrooms has reduced the integrity of the artist workmanship. However, the overall integrity of the workmanship still remains high.

Feeling

Feeling is a property's expression of the aesthetic or historical sense of a particular period of time. The feeling of The Ahwahnee has been slightly impacted by the deterioration and replacement of finishes and materials and by the reduced maintenance of the grounds, but despite this still retains much of its original feeling. The feeling of the cottages has been largely retained in the wooded site. The feeling of the dormitory is also largely retained. Overall, The Ahwahnee has a high level of integrity of feeling.

Association

Association is the direct link between an important historic event or person and an historic property. Because The Ahwahnee retains its original use and design, the building retains its historical association with the development of national park concessions, Yosemite National Park, and the National Park Service. The association with Dr. Donald B. Tresidder and Mary Curry Tresidder (who were originally responsible for management of the hotel) has been somewhat reduced by the remodeling of the sixth floor. The cottages retain their association with their designer Eldridge T. Spencer because they retain the design. The dormitory retains its association with the Navy use. Therefore, The Ahwahnee as a whole retains a high level of integrity of association.

In summary, other than the Navy use during World War II, the main building and cottages have continued to be used for their original purpose as a grand hotel. The majority of the changes to the building were in response to trends in the hospitality industry and the replacement of deteriorated and worn materials. In terms of volume, massing, materials and original design intent, the building is intact. While some aspects of integrity have been diminished over time, The Ahwahnee retains sufficient integrity to convey its significance.

Landscape Characteristics

The extraordinary natural features in The Ahwahnee project area were key factors in the siting and orientation of the hotel. The design of the site was informed by the Rustic style that was being established at this time by "landscape engineers" Charles Punchard, Daniel Hull, and Thomas Vint, and practiced by firms such as the Olmsted Brothers, and landscape gardeners such as Carl Purdy.

The following landscape characteristics include features that contribute to The Ahwahnee project area's cultural landscape and therefore historic significance:

- Buildings and Structures (as they relate to the surrounding environment)
- Circulation
- Views and Vistas
- Vegetation
- Natural Systems and Features

- Topography
- Land Use
- Spatial Organization
- Small-scale Features

Buildings and Structures

The central organizing element of the landscape is The Ahwahnee main building, designed to recall the cliff face, which is its backdrop. Other buildings within The Ahwahnee project area include the cottages and the dormitory, although these were sited to be obscured or unobtrusive from the main building. Additional structures within the project area include stone culverts, bridges, and service buildings.

Circulation

The cottages are accessible by means of pedestrian pathways and vehicle traffic (only for service and fire access). Pedestrian paths include asphalt paths and unpaved paths, providing a connection from the hotel to the cottages via two pedestrian bridges crossing Royal Arch Creek. The main asphalt path provides access to the cottages; there are two “spine” paths which link to individual cottages with smaller asphalt paths connecting to the cottage terraces (which are discussed below in ‘Buildings and Structures.’) The larger asphalt path continues east from the pedestrian bridge and leads towards the service and storage area east of the cottages. As this path crosses a small culvert, its asphalt paving disappears, and it is unpaved for the rest of its length. This unpaved path connects to the unpaved access roads which circle the cottages to the south, and becomes the valet parking area to the north and west.

Just east of the cottages, on the other side of an unnamed seasonal tributary, is a large, fragmented concrete pad, approximately 165 by 45 feet, used for equipment storage.

Views and Vistas

Scenic views and vistas are available from many areas of The Ahwahnee. Particularly notable are the views of Royal Arches, Yosemite Falls, Half Dome, and the views towards Royal Arches Cascade and Glacier Point (especially the former Fire Fall location). From the meadow, there are views back to the hotel. Many of these designed views have been compromised by the growth of vegetation over the years.

Vegetation

The vegetation at The Ahwahnee evokes the hotel’s natural surroundings. The mature evergreens, black oaks, and smaller understory shrubs and herbaceous plants define spaces within the grounds, screen views, and create garden spaces. The tall pines, firs, and sequoias dominate many areas of the landscape, and provide a thick ring of vegetation around the project area.

Natural Systems and Features

The Merced River runs along the southeastern boundary of the project area. Royal Arch Creek, a tributary of the Merced River, creates a physical separation between the hotel and the cottages. This seasonal creek flows during the winter, spring, and early summer, when it is fed by groundwater and snow melt, and it runs dry by the later summer. Lined with boulders, trees, and shrubs, the creek bed is quite deep. There is an unnamed seasonal tributary along the eastern edge of the cottages area that flows during rainfall and in the winter when groundwater levels are high, running dry in the summer. Its channel is composed mainly of stones and sandy soil.

Topography

Yosemite Valley is relatively flat and bounded by enormous cliffs. The Ahwahnee area includes a slope down to the Merced River, the curvilinear channel of Royal Arch Creek, the shallow depression of the unnamed seasonal tributary east of the cottages, and the constructed drainage channel north of the dormitory. The major topographic modifications at The Ahwahnee include the raised plinth on which the hotel was constructed, which is evident on its western side.

Land Use

The primary land use in the project area is lodging. This use has provided the basis for the design of the hotel and its grounds, including the cluster of cottages. Other secondary land uses include recreation. The dormitory supports the residential use of the grounds. Service and storage are supported in the service yard of the hotel, a storage building near the cottages, and the storage and service area east of the cottages.

Spatial Organization

The entire project area is enclosed by the cliffs to the north, the river and thick band of woods and bicycle trail to the south, and dense evergreen woods to the east and west. The area immediately surrounding the hotel building contains the Porte Cochere and designed planted spaces.

The terraces are included in this area, as is the lawn and swimming pool. East of the hotel is the cottages area—a densely wooded area with an asymmetrical organization of the plantings and buildings.

Environmental Consequences Methodology

In accordance with the Advisory Council on Historic Preservation's (ACHP) regulations implementing NHPA section 106, effects to cultural resources were identified and evaluated by:

- Determining the Area of Potential Effect (APE)
- Identifying cultural resources present in the APE that are either listed in or eligible for listing in the NRHP (Historic Properties)
- Applying the criteria of adverse effect to affected historic properties
- Considering ways to avoid, minimize, or mitigate adverse effects

Under ACHP regulations, a determination of *no historic properties affected*, *no adverse effect*, or *adverse effect* must be made for affected National Register of Historic Places (NRHP) eligible cultural resources. A determination of *no historic properties affected* occurs when there are no historic properties present, or the action will have no effect on historic properties. A determination of *no adverse effect* means that there is an effect, but the effect would not diminish, in any way, characteristics of a cultural resource that would qualify it for inclusion in the NRHP. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource which qualifies it for inclusion on the NRHP, by diminishing the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the alternatives that would occur at a later time or that would be cumulative over the course of time.

In accordance with 36 CFR 800 criteria of effect, The Ahwahnee historic site was analyzed qualitatively, based on modifications that would be made to character-defining features (features that qualified the property for inclusion in the NRHP and in 1987 as a NHL).

Alternatives and action items were considered individually and in relation to each other, to ensure that the analysis fully considers what elements of each action and/or linked actions would result in an adverse effect.

Environmental Consequences of No Action Alternative

Analysis

Under the No Action Alternative, code compliance recommendations would not be followed, including actions to bring the NHL structure into compliance with current seismic, building, plumbing, and electric codes and standards. Non-compliant or deteriorating mechanical, electrical, and plumbing (MEP) systems would not be replaced, upgraded, and/or refurbished. Recommended improvements to energy, water use, and operational efficiencies would not occur. The existing condition of historic spaces and features as detailed in Appendix C would persist.

Current maintenance and upkeep at The Ahwahnee would continue to provide interim repairs to aging MEP systems. However, due to the deteriorating condition of some of these systems, routine maintenance would not be sufficient to prevent system failure, which could lead to the catastrophic loss of historic features (e.g., failure of plumbing systems causing extensive water damage).

In addition, current maintenance and upkeep does not include repair or restoration of historic features. Historic spaces or features that are worn or in need of repairs and/or restoration would not be treated and no preemptive historic rehabilitation work would be performed to prevent further deterioration.

Therefore, the No Action Alternative would have the potential to diminish the integrity of The Ahwahnee, its contributing structures and features, and the ability for the property to represent its significant associations.

Conclusion: The No Action Alternative would have the potential to alter, directly or indirectly, characteristics of the historic site that qualified the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Therefore, the No Action Alternative would have an adverse effect on the historic property and on the Yosemite Valley Historic District.

Cumulative Impacts

In general, past development, operation, and maintenance of facilities throughout Yosemite National Park have protected and preserved the integrity of historic properties. Past projects that have been evaluated in conjunction with the impacts of proposed action alternatives include the installation of ADA-compliant elevator controls within The Ahwahnee, the *Interim Rockfall Parking Plan for The Ahwahnee*, and the *Yosemite Valley Shuttle Bus Stop Improvements* project. These projects contribute to beneficial cumulative impacts, particularly the ADA compliance actions and related improvements that enabled visitors to access the historic property without impacts on historic integrity, contributing spaces, and character-defining features. Additional past projects evaluated include the *Fire and Life Safety Improvements Project*; *Provide Secondary Egress from 5th and 6th Floors Project*; *The Ahwahnee Hotel Kitchen Install FRP Board project*; *The Ahwahnee Stabilize Kitchen Floor project*; *The Ahwahnee Rehabilitate Historic Light Fixtures project*; and *The Ahwahnee Hotel Interior Decorations Projects 2010-11*.

The Ahwahnee Fire and Life Safety Improvements Project installed fire sprinklers, detectors, and alarm systems throughout the NHL, affecting every room of the building and involving varying levels of disruption to historic finishes. These actions enabled the NHL to be protected into the future and provided substantial life safety that otherwise was absent within the structure.

The Secondary Egress from 5th and 6th Floors Project addressed inadequate life-safety egress issues. The action altered public spaces and related character-defining features and materials. The project was determined to have an adverse effect on the NHL. The 2011 Programmatic Agreement (Appendix A), developed through consultation between the National Park Service and the California State Historic Preservation Officer (SHPO) (Appendix A), was implemented to resolve the adverse effect.

The Ahwahnee Hotel Kitchen FRP Board Installation Project installed fiberglass on the vertical walls of the Kitchen for cleanliness and moisture abatement. All work was fully removable and reversible and sensitive to the historic walls of the Kitchen.

The Ahwahnee Hotel Stabilize Kitchen Floor project structurally strengthened and stabilized portions of the kitchen floor at the hotel. This project addressed the immediate concern of stabilization prior to implementing a more comprehensive kitchen rehabilitation.

The Ahwahnee Rehabilitate Historic Light Fixtures Project addressed immediate safety concerns related to original fixtures which are character-defining features of the NHL.

The Ahwahnee Hotel Interior Decoration Projects enhanced the historic character of the NHL by restoring finishes appropriately to the period of significance of the building (1927-1942), and appropriately decorating spaces in the buildings to reflect or be compatible with that significance.

Current and/or reasonably foreseeable future actions, projects, and plans that would have a cumulative effect on the historic property include:

The Scenic Vista Management Plan creates a program for the park to comprehensively prioritize viewpoints for management. Historic viewpoints from the Dining Room, Great Lounge, front lawn, Winter Club Room, and Solarium have become overgrown and resulted in altered views that would be addressed as part of the plan.

East Yosemite Valley Utilities Improvement Plan would provide for utility needs of the aging, inadequate, and inaccessible utility infrastructure within the park, leading to a potential benefit for the historic property and especially The Ahwahnee hotel.

The Ahwahnee Hotel Improve Porte Cochere Access Walkways and Fence Project would provide a more appropriate sense of arrival to the NHL, replacing rotted wood components along the wood-plank walkway and the service yard fence, allow better foundation for each component of the Porte Cochere, walkways, and fence, and address some drainage issues. These actions would benefit the entrance and its character-defining features to ensure the entire entrance does not further degrade from wood rot and water issues, and that the entrance to the NHL is not obstructed or uneven, rendering it not able to be used by visitors to the historic property. Previous alterations to the Porte Cochere supports and other wooden members render the proposed actions less impactful to historic design and fabric.

The Ground Floor Extended Door Replication Test would replace one set of exterior ground floor doors to serve as a design for replacement of the most severely damaged ground floor doors.

Cumulatively these actions, projects, and plans, when combined with the No Action Alternative, would result in an adverse effect to the NHL. Although the historic property would be

maintained, existing threats to the property and its systems from a lack of more substantial rehabilitation would continue.

Environmental Consequences of Alternative 1

Fire/Life-Safety Compliance

East Wing Egress

The existing East Wing egress from the second floor to the ground is via a narrow, non-compliant spiral stairway at the second floor balcony. Alternative 1 would remove the non-compliant spiral stairway and provide a new interior stairway from the second floor to the mezzanine level.

Additional actions associated with the new stairway include reconfiguration of the Ahwahnee Bar and the addition of an accessible room with a balcony (see ‘Other Accessibility Actions,’ below).

Improved and compliant access would allow the historic property to be code-compliant and to better meet the needs of its original and on-going historic use. These alterations would be to non-historic additions and previously altered spaces.

Other Fire/Life-Safety Upgrades

All of the action alternatives include the addition of a fire separation between the Dining Room and the hotel, with concealed overhead fire doors at the openings at the Dining Room entry, Kitchen door, and the Diggins Suite.

The Diggins Suite has been modified several times since the period of significance. The proposed roll-down doors at the Diggins Suite (mezzanine level) would be concealed in the ceiling except in the event of fire, at which time they would be deployed. The dropped ceiling location allows sufficient space to fully conceal the roll-down door from public view when it is not deployed.

In addition, Alternative 1 would provide code-required upgrades to electrical and ventilation systems. These actions are all considered necessary for the continued protection and preservation of the NHL and would not impact the integrity of the NHL or its contributing spaces and character-defining features.

Seismic Safety Recommended Practice and Structural Strengthening

Kitchen Modifications

Alternative 1 would brace the Dining Room from the Kitchen side with a minimally sized mezzanine. This would alter a character-defining volume of the Kitchen space, but structural stabilization of the wood-framed Dining Room is necessary to meet current seismic standards.

The existing floor, substrate, walls, and finishes in the Kitchen area would be altered and/or removed as necessary for structural work. This alternative would reuse as much existing equipment as feasible in the new, efficient, main kitchen layout. The existing north end of the Kitchen (with refrigerators and mezzanine) would be retained as much as possible. Partitions, doors, windows, slab, and finishes would be altered and/or removed along the south elevation, where necessary, to accommodate the seismic improvements.

Alternative 1 would include a partial mezzanine at the south and north of the Kitchen space. It would leave a portion of the original mezzanine space and a small area of the original double height of the Kitchen to convey its original design and configuration. These actions would retain and protect the character-defining features and materials of the Kitchen. The smaller mezzanine,

which addresses seismic engineering concerns while maintaining the character-defining volume of the space, allows Alternative 1 to less aggressively address the need for seismic strengthening of the Dining Room and improvements to operations within the Kitchen spaces than Alternative 2. Alternative 1 would minimize modification of the Kitchen's spatial configuration and original design.

The Kitchen is an important Contributing space due to its utilitarian function and design. The space reflects the original and continued function of the historic property and represents how such utilitarian spaces were designed and used. Under Alternative 1, a substantial amount of original volume within the space would be retained, as would a substantial amount of original partition walls. Original features and materials would be preserved to the extent feasible within the requirements of the rehabilitation process, and in particular the seismic stabilization effort. Alternative 1 would preserve an open area of two-story volume between the existing north mezzanine and the new brace-frame mezzanine on the south side of the Kitchen. The integrity of the historic spaces would be retained during rehabilitation actions, including the integrity of workmanship, materials, and feeling.

Other Seismic Safety Actions

Other seismic safety actions with the potential to affect the historic property under Alternative 1 would include the following:

- Columns at the west side of the Dining Room would be capped. The Dining Room would be braced in the east/west direction and the stone veneer on columns at the east side would be pinned. The proposed glazing would meet seismic life-safety requirements and would be installed without altering the original window frame profile.
- The exterior granite veneer at the hotel would be pinned with stainless steel pins at egress paths.
- Stone chimneys would be stabilized at five locations with an exterior collar strap and external guy wires. The alteration proposed for the stone chimneys stabilization would impact historic fabric and be visible on the exterior.
- Two-story walls at the Solarium and Great Room fireplaces would be braced to the building structure with strong backing at selected locations.
- Stone chimneys at the cottages would be reinforced with 2x blocking, clips, and straps in the attic space.
- Splice plate connections at the truss would be replaced and a snowmelt/retention system would be replaced at the roof. These actions would provide stabilization and strengthening.

These seismic strengthening actions are considered necessary to protect the structure and its character-defining spaces, features, and materials are protected and continue to be preserved into the future.

Accessibility Compliance

South Mezzanine Meeting Rooms

The South Mezzanine above the Solarium space is isolated and can be accessed only by a stairway in the Solarium. The Solarium as well as the three historic meeting rooms in the South Mezzanine (Tresidder Room, Tudor Lounge, and the Colonial Room) are identified as Very Significant in the HSR (see Appendix C). Under Alternative 1, the Tudor Lounge and Colonial Room would remain

closed to public use, but available for employee meetings of up to 30 people. The Tresidder Room would remain closed to all use.

In order to provide ADA-compliant employee accessibility to the Tudor Lounge and Colonial Room, Alternative 1 would provide a limited use/limited access elevator in an existing storage closet space to the northeast of the Solarium and would also re-route the existing mezzanine stairway leading from the northwest end of the Solarium to the meeting rooms.

Installation of a limited use/limited access elevator would require modifying the beam and slab at the ground floor and installing a new structure. The proposed elevator would be concealed within the walls of an existing storage closet space. Entry doors would be installed with a compatible wood-plank design, consistent with the original historic wood closet door. Adjacent plaster finishes would be restored. The action would also rebuild the centrally located stairway along the north elevation of the Solarium within the original rise + run ratio, as permitted, and include a handrail and signage improvements.

Actions that would impact historic fabric under Alternative 1 would include installing new doors and elevator controls to plaster wall elevations in Very Significant areas, altering the existing stairway above the landing over the fountain, removing the guardrail at the mezzanine, raising the light fixture over the stair, and installing new railings and handrails.

The proposed location of the elevator under Alternative 1 would result in a modification with less of a visual effect and less impact to the original configuration of the space than options such as in Alternative 2, which would require removal of partitions and altering of the Solarium area. The intent of the area would not be affected and the features representative of the area's original purpose, including existing spatial relationships and extant architectural features and materials (such as the dramatic fenestration along the south elevation), would be retained.

Restrooms

Alternative 1 would maintain the existing men's restroom in its current condition on the ground floor, while expanding the existing women's restroom on the mezzanine level to increase the fixture count and maintain accessibility. A unisex restroom would be added to the ground floor.

The existing women's restroom is a non-historic space that is identified in the HSR as Contributing with low integrity (see Appendix C). The existing women's restroom space has undergone previous modifications. Due to the modifications this area has already sustained, Alternative 1 is considered less impactful than relocating the women's restroom (Alternative 2), as it retains the original configuration of the space and does not introduce additional restrooms on the ground floor (other than a unisex restroom to be installed near the men's restroom).

Maintaining the original and historic separation of the women's and men's restrooms, and refraining from significant change to the spatial sequence of ground floor spaces, would meet the goal of providing more restrooms. In addition, introducing a single unisex restroom would not have an impact on the ground floor, because one additional restroom fixture would not lead to a significant change in function or aesthetic of the ground floor public spaces.

In summary, maintaining the men's restroom as-is, expanding the women's restroom on the mezzanine, and adding a unisex restroom on the ground floor would not significantly alter the original function, configuration, or design of character-defining spaces and features.

Other Accessibility Actions

Other accessibility issues addressed under Alternative 1 include providing reversible ramps and hardware at selected ground floor exterior entrances, improving accessibility to the hotel's main front doors and improving accessibility at the front desk, concierge, and lobby spaces. Improvements would include changes to the existing counter to allow for accessible check-in, replacing the non-historic concierge counter with furnishings and a desk for service, and providing two additional ADA guestroom suites.

Under Alternative 1, the Ahwahnee Bar would be reconfigured to improve service and accessibility by removing the existing service bar and kitchen on the east side of the bar, removing non-historic additions at the east and north ends of the bar, and constructing a new kitchen and bar in a new projecting addition at the north end of the bar space. The roof of the projection would provide an accessible balcony for a new guestroom suite on the mezzanine level.

The above ADA compliance actions would provide improved and compliant access for visitors throughout the NHL, allowing the historic property to be code-compliant and to better meet the needs of its original and on-going historic use.

Historic Rehabilitation

Under all action alternatives, historic rehabilitation actions would rehabilitate and stabilize features of the hotel in “poor” condition (see Appendix C). Features in “fair” condition in Very Significant and Significant spaces would be preserved and rehabilitated following the Secretary of the Interior's Standards for Rehabilitation (the *Standards*)(USDI 2005). Rehabilitation work also includes work directly associated with other actions that would affect historic fabric or features in the hotel and cottages.

Proposed historic rehabilitation actions allow for the continued protection and preservation of the NHL and its contributing spaces and character-defining features at each level of condition.

Operational Efficiency

See ‘Seismic Strengthening,’ above, for the impacts of proposed changes to the Kitchen.

Locker Room Modifications

Alternative 1 would provide a south Kitchen mezzanine that allows for new employee facilities (e.g., ingress, lockers, changing, breakroom, etc.) above the Kitchen.

Locker room modifications are linked to proposed actions within the Kitchen space. The locker room space is not architecturally articulated, although it is identified as a Contributing Historic Utilitarian space in the HSR (see Appendix C). The locker room modifications would occur in spaces that are essentially unmodified. The modifications would remove original partitions to accommodate a significant differential of nearly three feet along the floor where a proposed wheelchair lift would be added. The differential is between the area of the lift and the opposite (south) end, and there is a stairway at the wall where the differential occurs.

In summary, by modifying the Kitchen to include a partial mezzanine and correcting the differential along the floor, improved accessibility would be accommodated and operational goals can be met. In total, the configuration of the Kitchen and locker room spaces would not be substantially modified under Alternative 1.

Other Operational Efficiency Actions

Action items related to improving operational efficiency within The Ahwahnee include improvements to maintenance facilities and storage spaces as well as upgrades to electrical and mechanical systems. More extensive operational efficiency tasks include reconfiguration of the existing Gift Shop/Retail Storage space. Alternative 1 would also waterproof the basement, which would allow for fire safety and improved conditions in the historic structure.

The operational efficiency actions related to improving maintenance facilities and storage spaces, as well as upgrades to electrical and mechanical systems would have no impact on the integrity of the NHL or its contributing spaces and character-defining features.

Visitor Experience and Visitor Services

Visitor experience and/or visitor service actions involving features related to historic fabric, or actions located near historic spaces and features, would include: removal of non-historic additions and finishes, rehabilitation of historic finishes at the Dining Room service bar, and reconfiguration of the Ahwahnee Bar. In addition, the lobby and guest arrival experience would be altered with the removal of the built-in counter and a provision of a moveable desk for the concierge near the Sweet Shop. Mechanical changes would be made to maintain capacity and improve heating and cooling in guestrooms. The non-historic passenger elevator would also be rehabilitated with design finishes and replacement fixtures of compatible historic character.

These actions would alter non-historic spaces, features, and materials. Rehabilitation of historic finishes at the wine bar and service bar would have a beneficial effect on the Dining Room.

Energy Efficiency

Energy efficiency actions involving features related to historic fabric, or actions located near historic spaces and features, would include: removal of existing aluminum guestroom windows and replacement with historically compatible wood-framed, double-paned, insulated, low-e casement windows, and refurbishing historic fixtures in ground floor public areas.

In addition, HVAC units in guestrooms would be replaced. The majority of existing HVAC units are located in existing guestroom soffits, with some installed in adjacent storage rooms. New HVAC units would be installed in the same locations and would not be visible to guests. The majority of the existing walls adjacent to the HVAC units were previously altered to metal stud and gypsum board construction during installation of the existing HVAC units. Any remaining historic fabric would be preserved to the greatest extent possible. Historic registers and register openings would be reused wherever feasible.

Landscape Actions

The proposed actions in the landscape outside of the hotel would allow the property to be code compliant for fire safety and also bring the property further into compliance with ADA-ABA requirements. None of the actions proposed would impact the integrity of the NHL or impact its contributing spaces and character-defining features.

Conclusion: Although the majority of proposed actions would not impact the characteristics that make The Ahwahnee eligible for inclusion on the NRHP, or diminish its integrity, as a whole Alternative 1 would result in an adverse effect to the historic property.

The 2011 Programmatic Agreement (Appendix A) would be implemented to resolve the adverse effect. In addition, NPS historical architects and the park historic preservation officer will

continue to work with the project design team and SHPO to minimize the adverse effect on the historic property during and construction planning and implementation.

Alternative 1 would result in no adverse effect to the Yosemite Valley Historic District.

Cumulative Impacts

The list of past, present, and reasonably foreseeable actions that may affect the NHL and/or the Yosemite Valley Historic District is the same as under the No Action Alternative.

Cumulatively these actions, projects, and plans, when combined with Alternative 1 would result in an adverse effect on the historic property, but would not result in an adverse effect on the Yosemite Valley Historic District to which it contributes.

Environmental Consequences of Alternative 2

Fire/Life-Safety Compliance

East Wing Egress

The existing East Wing egress from the second floor to the ground is via a narrow, non-compliant spiral stairway at the second floor balcony. Alternative 2 would remove the non-compliant spiral stairway and provide a new code-compliant exterior stairway from the second floor to the ground floor. Additional actions associated with this stairway include reconfiguration of the Ahwahnee Bar and the addition of an accessible room with a balcony (see ‘Other Accessibility Actions’ below).

Improved and compliant access would allow the historic property to be code-compliant and to better meet the needs of its original and on-going historic use. These alterations would be to non-historic additions and previously altered spaces.

South Mezzanine Egress

A second, code-compliant means of egress is required at the South Mezzanine in order to allow public use of this space. The three Very Significant meeting rooms at the South Mezzanine (Tresidder Room, Tudor Lounge, and the Colonial Room) are distinctive, and the attached east and west balconies (off of the Colonial and Tresidder Rooms, respectively) provide unique first-level views to the surrounding hotel grounds, meadow, and iconic geologic formations.

To re-establish visitor access and enjoyment of the South Mezzanine spaces and balconies, Alternative 2 would provide code-compliant egress with a new door through the north wall of the Tresidder Room to an exterior fire escape. The proposed new door would further alter the space and the historic property. However, the proposed location represents the best overall solution to assure continued public access to these spaces while minimizing further visual effects on the building exterior in the vicinity of the non-historic fire escape. The interior door opening would be designed to be compatible with the character and finishes of the Tresidder Room. The exterior door opening would be situated in an existing niche behind a pilaster column projection at the mezzanine elevation of the existing non-historic fire escape, thereby minimizing visual effects on the significant exterior of the hotel building.

Other Fire/Life-Safety Upgrades

All of the action alternatives include the addition of a fire separation between the Dining Room and the hotel, with concealed overhead fire doors at the openings at the Dining Room entry,

Kitchen door, and Diggins Suite. As noted under Alternative 1, the Diggins Suite has been modified several times since the period of significance and the proposed roll-down doors would be concealed in the ceiling, where they would be fully concealed from public view when not deployed.

In addition, Alternative 2 would replace the elevator service side pocket door and cage, provide a fully metal ducted shaft system, install wood blocking or fire-safing at all floor penetrations, and improve the fire resistance in the vicinity of the first floor linen room. Alternative 2 would provide a new corridor ventilation system for guestroom corridors and would upgrade ventilation in the Elevator Machine Room by providing a permanent air conditioning unit with an exterior vent through an existing window opening.

The proposed ventilation system for the Elevator Machine Room would involve removing the abandoned exhaust fan unit on the north-facing side of the penthouse and installing a new louver within the same, already-modified window. The venting for the preferred cooling system would affect only previously altered openings from the penthouse; no remaining historic fabric would be altered by the new ventilation system.

These actions are all considered necessary for the continued protection and preservation of the NHL.

Seismic Safety Recommended Practice and Structural Strengthening

Kitchen Modifications

Alternative 2 would brace the Dining Room to the Kitchen side with a partial south mezzanine at the Kitchen that would alter a character-defining volume of the Kitchen space. Alternative 2 would also provide a new, efficient Kitchen layout and would remove existing refrigerators and the mezzanine to build a new north Kitchen mezzanine.

Alternative 2 would have an extensive impact on the existing partitions, doors, windows, slab, and finishes in the Kitchen. The existing floor, substrate, walls, and finishes in the Kitchen area would be removed for structural work. All appliances and major equipment would also be removed and the historic refrigerator doors salvaged for reuse. Partitions, doors, windows, slab, and finishes would also be removed in the Kitchen along the south elevation. Under Alternative 2, the Kitchen space would be completely void of original partitions.

Kitchen spaces and ancillary spaces (along the north end) that include the freezers and refrigerators would be, for the most part, removed. A new elevator would be accommodated through the removal of original walls, slab, beam, and finishes; shoring of existing structure would be done as required. A new exterior opening would be cut out of a concrete wall with selective removal of stone veneer as necessary. Historic doors would be removed and salvaged for reuse where partitions at freezers/refrigerators would be removed.

The Kitchen is an important Contributing space due to its utilitarian function and design. The space reflects the original and continued function of the historic property and represents how such utilitarian spaces were designed and used. Alternative 2 would remove features and materials from the Kitchen that are paramount to understanding the original construction and configuration of this utilitarian space and its representation of the utilitarian spaces within The Ahwahnee.

Other Seismic Safety Actions

Other seismic safety actions with the potential to affect the historic property under Alternative 2 would include the following:

- Columns at the west side of the Dining Room would be capped. The Dining Room would be braced in the east/west direction and the stone veneer on columns at the east side would be pinned. The proposed glazing would meet seismic life-safety requirements and would be installed without altering the original window frame profile.
- The exterior granite veneer at the hotel would be pinned with stainless steel pins throughout the exterior of the hotel.
- Stone chimneys at the hotel would be stabilized at five locations using non-visible internal reinforcing rods with a concrete ring in the attic.
- Two-story walls at the Solarium and Great Room fireplaces would be braced to the building structure with strong backing at selected locations.
- Stone chimneys at the cottages would be reinforced with 2x blocking, clips and straps in the attic space.
- Splice plate connections at the truss would be replaced and a snowmelt/retention system would be replaced at the roof.

These seismic strengthening actions are considered necessary to protect the structure and its character-defining spaces, features, and materials are protected and continue to be preserved into the future.

Accessibility Compliance

South Mezzanine Meeting Rooms

The South Mezzanine above the Solarium space is isolated and can be accessed only by a stairway in the Solarium. The Solarium as well as the three historic meeting rooms in the South Mezzanine (Tresidder Room, Tudor Lounge, and the Colonial Room) are identified as Very Significant in the HSR (see Appendix C). Under Alternative 2, the South Mezzanine meeting rooms would be re-opened to public use (see ‘Fire/Life-Safety Compliance, South Mezzanine Egress,’ above).

In order to provide ADA-compliant access to the South Mezzanine, Alternative 2 would provide a limited use/limited access elevator at the Solarium. Installation of the limited use/limited access elevator would require modifying the beam and slab at the ground floor to install the new structure. The location of the new elevator under Alternative 2 would require the removal of partitions of existing walls and would further alter the Solarium and the South Wing of the hotel. Shear wall installation at the east and west ends of the Solarium would coincide with the work proposed, with new walls to match existing adjacent walls.

The impact on historic fabric from the proposed action would include installing new doors and elevator controls to plaster wall elevations in Very Significant areas, altering the existing stairway above the landing over the fountain, removing the guardrail at the mezzanine, raising the light fixture over the stair, and installing new railings and handrails. The new elevator would create an entirely new access to the Solarium from the existing condition, which would change the current and original symmetry of the space.

Reconfiguring the stairway so that it no longer follows its original spatial configuration and direction would also have an impact. The new stairway would change the original configuration and direction of travel providing access to the mezzanine spaces. The stairway materials were

added during a modification to the original stairway after the period of significance, and yet the configuration is character-defining and reflects the original configuration of the stairway built during the construction of the historic property.

The intent of the area would not be impacted and the features representative of the area's original purpose, including existing spatial relationships and extant architectural features and materials (such as the dramatic fenestration along the south elevation), would be retained.

Restrooms

Alternative 2 would reconfigure the men's restroom on the ground floor to increase its fixture count, maintain the existing women's restroom on the mezzanine, and provide a supplemental accessible women's restroom on the ground floor to increase the overall fixture count on the ground floor.

While office spaces on the ground floor have been modified over the years, introducing a women's restroom on the ground floor, in addition to the existing men's restroom, would alter the original use and configuration of these spaces and of the ground floor in general. Expanding the ground floor restroom spaces with a substantial number of additional fixtures would impact the overall configuration, function, and visitor experience associated with the ground floor and its many Significant and Very Significant spaces.

Adding a women's restroom to the ground floor would significantly impact the integrity and character of the ground floor and would specifically impact the feeling and design of the spaces. While the existing spatial relationships and extant architectural character of the public spaces would be retained, the intent of the ground floor areas would not be maintained or protected.

Other Accessibility Actions

Other accessibility issues addressed under Alternative 2 include: outfitting the main doors to the hotel with an automatic door operator and thresholds in a historically compatible and acceptable manner that would be *Standards*-compliant; providing reversible ramps and hardware at selected ground floor exterior entrances; and improving accessibility at the front desk, concierge, and lobby spaces by converting the existing counter to allow for accessible check-in and replacing the non-historic concierge counter with furnishings and a desk for service. In addition, two additional ADA-compliant guestrooms, one a suite with a balcony, would be provided.

Alternative 2 would reconfigure the Ahwahnee Bar to improve service and provide accessibility by removing the existing service bar and kitchen on the east side of the space, removing non-historic additions at the east and north ends of the bar, constructing a new kitchen and bar in a new projection on the east wall, and installing glazing in the north wall to restore a sense of openness similar to the original design intent for this space.

The above ADA compliance actions would provide improved and compliant access for visitors throughout the NHL, allowing the historic property to be code-compliant and to better meet the needs of its original and on-going historic use.

Historic Rehabilitation

Under all action alternatives, historic rehabilitation actions would rehabilitate and stabilize features of the hotel in “poor” condition (see Appendix C). Features in “fair” condition in Very Significant and Significant spaces would be preserved and rehabilitated. Rehabilitation work also includes work associated directly with other actions that would affect historic fabric or features in the hotel and cottages. All rehabilitation efforts would be *Standards*-compliant. In addition,

Alternative 2 would implement non-maintenance treatment recommendations (ARG 2011) for the hotel and cottages for features/fabric in Contributing and Historic Utilitarian spaces.

Proposed historic rehabilitation actions would allow for the continued protection and preservation of the NHL and its contributing spaces and character-defining features at each level of condition.

Operational Efficiency

See ‘Seismic Strengthening,’ above, for the impacts of proposed changes to the Kitchen.

Locker Room Modifications

Alternative 2 would provide accessible employee facilities including locker rooms, offices, a breakroom, service elevator, and a mechanical/electrical room on the new partial south mezzanine.

Locker room modifications are linked to proposed actions within the Kitchen space, which would be required to allow the locker rooms to become accessible for ADA purposes and improved for operational efficiency. The locker room space is not architecturally articulated, though it is identified in the 2011 HSR as a Contributing Historic Utilitarian space (see Appendix C).

The locker room modifications would occur in spaces that are essentially unmodified. The action would remove original partitions to accommodate a significant differential of nearly three feet along the floor where a proposed wheelchair lift would be added. The differential is between the area of the lift and the opposite (south) end, and there is a stairway at the wall where the differential occurs.

By modifying the Kitchen to include a full mezzanine, and correcting the differential along the floor, improved accessibility would be accommodated and extensive operational goals can be met. The configuration of the Kitchen and locker room spaces would be substantially modified.

Other Operational Efficiency Actions

Action items related to improving operational efficiency within The Ahwahnee include improvements to maintenance facilities and storage spaces as well as upgrades to electrical and mechanical systems. More extensive operational efficiency tasks include raising the height of the Porte Cochere to accommodate modern buses and a reconfiguration of the Gift Shop/Retail Storage space. Like Alternative 1, Alternative 2 would also waterproof the basement, which would allow for fire safety and improved conditions in the historic structure.

The operational efficiency actions related to improving maintenance facilities and storage spaces as well as upgrades to electrical and mechanical systems would have no impact on the integrity of the NHL or its contributing spaces and character-defining features.

Modification of the height of the Porte Cochere would impact the relationship of the Porte with its base, the adjacent walls, and the entry canopy.

Visitor Experience and Visitor Services

Visitor experience and/or visitor service actions involving features related to historic fabric or actions located near historic spaces and features would include: removal of non-historic additions and finishes, and rehabilitation of historic finishes at the Dining Room service bar, and remodeling at the Ahwahnee Bar. In addition, the lobby and guest arrival experience would be

modified with the removal of the built-in counter and a moveable desk for the concierge near the Sweet Shop. Mechanical changes would be made to maintain capacity and allow for air conditioning in ground floor public spaces and to the hotel and cottage guestrooms. The non-historic passenger elevator would also be rehabilitated with design finishes and replacement fixtures of compatible historic character.

These actions would alter non-historic spaces, features, and materials. Rehabilitation of historic finishes at the wine bar and service bar would have a beneficial effect on the Dining Room.

Energy Efficiency

Energy efficiency actions involving features related to historic fabric or actions located near historic spaces and features would include: removal of existing aluminum guestroom windows and replacement with historically compatible wood-framed, double-paned, insulated, low-e casement windows, and refurbishing historic fixtures in ground floor public areas.

In addition, HVAC units in guestrooms would be replaced. The majority of existing HVAC units are located in existing guestroom soffits, with some installed in adjacent storage rooms. New HVAC units would be installed in the same locations and would not be visible to guests. The majority of the existing walls adjacent to the HVAC units were previously altered to metal stud and gypsum board construction during installation of the existing HVAC units. Any remaining historic fabric would be preserved to the greatest extent possible. Historic registers and register openings would be reused wherever feasible.

These actions would further protect and preserve the NHL and its contributing spaces and character-defining features.

Landscape Actions

The proposed actions in the landscape outside of the hotel would allow the property to be code compliant for fire safety and also bring the property further into compliance with ADA-ABA requirements. None of the actions proposed would impact the integrity of the NHL or impact its contributing spaces and character-defining features.

Conclusion: Although the majority of proposed actions would not impact the characteristics that make The Ahwahnee eligible for inclusion on the NRHP, or diminish its integrity, as a whole Alternative 2 would result in an adverse effect to the historic property.

The 2011 Programmatic Agreement (Appendix A) would be implemented to resolve the adverse effect. In addition, NPS historical architects and the park historic preservation officer will continue to work with the project design team and SHPO to minimize the adverse effect on the historic property during and construction planning and implementation.

Alternative 2 would result in no adverse effect to the Yosemite Valley Historic District.

Cumulative Impacts

The list of past, present, and reasonably foreseeable actions that may affect the NHL and/or the Yosemite Valley Historic District is the same as under the No Action Alternative.

Cumulatively these actions, projects, and plans, when combined with Alternative 2 would result in an adverse effect on the historic property, but would not result in an adverse effect on the Yosemite Valley Historic District to which it contributes.

Environmental Consequences of Alternative 3

Fire/Life-Safety Compliance

East Wing Egress

The existing East Wing egress from the second floor to the ground is via a narrow, non-compliant spiral stairway at the second floor balcony. As under Alternative 1, Alternative 3 would remove the non-compliant spiral stairway and provide a new interior stairway from the second floor to the mezzanine level. Additional actions associated with the new stairway include reconfiguration of the Ahwahnee Bar and the addition of an accessible room with a balcony (see ‘Other Accessibility Actions,’ below).

Improved and compliant access would allow the historic property to be code-compliant and to better meet the needs of its original and on-going historic use. These alterations would be to non-historic additions and previously altered spaces.

South Mezzanine Egress

A second, code-compliant means of egress is required at the South Mezzanine in order to allow continued use of this public space by visitors. The three Very Significant South Mezzanine meeting rooms (Tresidder Room, Tudor Lounge, and the Colonial Room) are distinctive, and the attached east and west balconies (off of the Colonial and Tresidder Rooms, respectively) provide unique first-level views to the surrounding hotel grounds, meadow, and iconic geologic formations.

As in Alternative 2, Alternative 3 would provide code-compliant egress at the South Mezzanine with a new door through the north wall of the Tresidder Room to the exterior fire escape. The proposed new door would further alter and impact the space and the historic property. However, the proposed location represents the best overall solution to assure continued public access to these spaces while minimizing further visual effects on the building exterior in the vicinity of the non-historic fire escape. The interior door opening would be designed to be compatible with the character and finishes of the Tresidder Room. The exterior door opening would be situated in an existing niche behind a pilaster column projection at the mezzanine elevation of the existing non-historic fire escape, thereby minimizing visual effects on the significant exterior of the hotel building.

Other Fire/Life-Safety Upgrades

All of the action alternatives include the addition of a fire separation between the Dining Room and the hotel, with concealed overhead fire doors at the openings at the Dining Room entry, Kitchen door, and Diggins Suite.

As in Alternative 1, Alternative 3 would replace the elevator service side pocket door and cage, install wood blocking or fire-safing at all floor penetrations, improve fire resistance of shaft per vertical shaft protection, and improve the first floor linen room. As in Alternative 2, Alternative 3 would provide a new corridor ventilation system for guestroom corridors and would upgrade ventilation in the Elevator Machine Room by providing a permanent air conditioning unit with an exterior vent through an existing window opening.

As in Alternative 2, the proposed ventilation system for the Elevator Machine Room would involve removing the abandoned exhaust fan unit on the north-facing side of the penthouse and installing a new louver within the same, already-modified window. The venting for the preferred

cooling system would affect only previously altered openings from the penthouse; no remaining historic fabric would be altered by the new ventilation system

These actions are all considered necessary for the continued protection and preservation of the NHL.

Seismic Safety Recommended Practice and Structural Strengthening

Kitchen Modifications

As in Alternative 1, Alternative 3 would brace the Dining Room from the Kitchen side with a minimally sized mezzanine. This action would alter a character-defining volume of the Kitchen space, but structural stabilization of the wood-framed Dining Room is necessary to meet current seismic standards.

The existing floor, substrate, walls, and finishes in the Kitchen area would be altered and/or removed as necessary for structural work. The alternative would reuse as much existing equipment as feasible in the new efficient main kitchen layout, and the existing north end of the kitchen (with refrigerators and mezzanine) would be retained as much as possible. Partitions, doors, windows, slab, and finishes would be altered and/or removed in the Kitchen along the south elevation, where necessary, to accommodate the seismic activities associated with the Dining Room.

Like Alternative 1, Alternative 3 would include a partial mezzanine at the south and north of the space, and it would leave a portion of the original mezzanine space and a small area of the original double height of the Kitchen to convey its original design and configuration. These actions would retain and protect the character-defining features and materials of the Kitchen. The smaller mezzanine, that addresses seismic engineering concerns while maintaining the perception of the character-defining volume of the space, allows Alternative 3 to less aggressively respond to the need for seismic strengthening of the Dining Room and improvements to operations within the Kitchen spaces. The actions would not lead to a total modification of the Kitchen's spatial configuration and original design.

The Kitchen is an important Contributing space due to its utilitarian function and design. The space reflects the original and continued function of the historic property and represents how such utilitarian spaces were designed and used. Under Alternative 3 (as under Alternative 1) a substantial amount of original volume within the space would be retained, as would a substantial amount of original partition walls. Original features and materials would be preserved to the extent feasible within the requirements of the rehabilitation process, and in particular the seismic stabilization effort. An open area of two-story volume between the existing north mezzanine and the new brace-frame mezzanine on the south side of the Kitchen would be preserved. The integrity of the historic spaces would be retained during rehabilitation actions, including the integrity of workmanship, materials, and feeling.

Other Seismic Safety Actions

Other seismic safety actions with the potential to affect the historic property under Alternative 3 would include the following:

- Columns at the west side of the Dining Room would be capped. The Dining Room would be braced in the east/west direction and the stone veneer on columns at the east side would be pinned. The proposed glazing would meet seismic life-safety requirements and would be installed without altering the original window frame profile.

- The exterior granite veneer at the hotel would be pinned with stainless steel pins above egress points only at the exterior of the hotel.
- Stone chimneys at the hotel would be stabilized at five locations using non-visible internal reinforcing rods with a concrete ring in the attic.
- Two-story walls at the Solarium and Great Room fireplaces would be braced to the building structure with strong backing at selected locations.
- Stone chimneys at the cottages would be reinforced with 2x blocking, clips and straps in the attic space.
- Splice plate connections at the truss would be replaced and a snowmelt/retention system would be replaced at the roof.

These seismic strengthening actions are considered necessary to protect the structure and its character-defining spaces, features, and materials are protected and continue to be preserved into the future.

Accessibility Compliance

South Mezzanine Meeting Rooms

The South Mezzanine above the Solarium space is isolated and can be accessed only by a stairway in the Solarium. The Solarium as well as the three historic meeting rooms in the South Mezzanine (Tresidder Room, Tudor Lounge, and the Colonial Room) are identified as Very Significant in the HSR (see Appendix C). Under Alternatives 2 and 3, the South Mezzanine meeting rooms would be re-opened to public use (see ‘Fire/Life-Safety Compliance, South Mezzanine Egress,’ above).

All action alternatives would provide a limited use/limited access elevator to access the South Mezzanine from the Solarium in order to provide ADA-compliant access to the South Mezzanine meeting rooms. Under Alternative 3 (as under Alternative 1), the elevator would be located at an existing storage closet space to the northeast of the Solarium and would also re-route the existing mezzanine stairway leading from the northwest end of the Solarium to the meeting rooms.

Installation of a limited use/limited access elevator would require modifying the beam and slab at the ground floor and installing a new structure. The proposed elevator would be concealed within the walls of the existing storage closet space. Entry doors would be installed with a compatible wood-plank design, consistent with the original historic wood closet door. Adjacent plaster finishes would be restored. The action would also rebuild the centrally located stairway along the north elevation of the Solarium within the original rise + run ratio, as permitted, and include a handrail and signage improvements. The proposed location of the elevator under Alternative 3 would result in a modification with less of a visual effect and less impact to the original configuration of the space than Alternative 2.

Actions that would impact historic fabric under Alternative 3 (and Alternative 1) would include installing new doors and elevator controls to plaster wall elevations in Very Significant areas, altering the existing stair above the landing over the fountain, removing the guardrail at the mezzanine, raising the light fixture over the stair, and installing new railings and handrails.

The intent of the area would not be impacted and the features representative of the area's original purpose, including existing spatial relationships and extant architectural features and materials (such as the dramatic fenestration along the south elevation), would be retained. However, the integrity of workmanship and design of the Solarium would be impacted.

Restrooms

Alternative 3 would expand the men's restroom on the ground floor into administrative offices (Gift Shop Storage) and would expand the women's restroom on the mezzanine to increase fixture count and maintain accessibility. A unisex restroom would be provided on the ground floor adjacent to the men's restroom. The alternative is a hybrid of work proposed in Alternative 1 and new work proposed under Alternative 3, providing the most substantial accessibility and equal facilitation to public restrooms for the hotel.

The existing women's restroom is a non-historic space that is identified in the HSR as Contributing with low integrity (see Appendix C). The existing women's restroom space has undergone previous modifications. Due to the modifications this area has already sustained, Alternative 3 is considered less impactful than relocating the women's restroom (Alternative 2), as it retains the women's restroom use on the first floor of the original configuration of the hotel.

Maintaining the original and historic separation of the women's and men's restrooms, and refraining from significant change to the spatial sequence of ground floor spaces, would allow the goal of providing more restrooms to be met. In addition, introducing a single unisex restroom would not lead to a significant change in function or aesthetic of the ground floor public spaces.

Other Accessibility Actions

Other accessibility issues addressed under Alternative 3 include: providing two more ADA guestrooms with a balcony at the first floor (similar to the location of the Alternative 1, but over the east Ahwahnee Bar extension rather than the north), providing automatic door operators and thresholds in a historically compatible manner at the main doors to the hotel, providing reversible ramps and hardware at selected entrances, and replacing non-compatible concierge counter with furnishing desk for accessible check-in and concierge.

The Ahwahnee Bar is not accessible for staff, and the current configuration includes non-historic additions that obscure the original design intent for use of this space as an open *Porte Cochere*. Alternative 3 is consistent with the Alternative 2 Ahwahnee Bar reconfiguration scheme, and would remove the existing service bar and kitchen on the east side of the bar space, construct a new kitchen and bar in a new projection on the east wall, and install glazing in the north wall to restore a sense of openness similar to the original design intent for this space.

The above ADA compliance actions would provide improved and compliant access for visitors throughout the NHL, allowing the historic property to be code-compliant and to better meet the needs of its original and on-going historic use.

Historic Rehabilitation

As in all action alternatives, historic rehabilitation actions would rehabilitate and stabilize features of the hotel in “poor” condition (see Appendix C). Features in “fair” condition in Very Significant and Significant spaces would be preserved and rehabilitated. Rehabilitation work also includes work associated directly with other actions that would affect historic fabric or features in the hotel and cottages. All rehabilitation efforts would be *Standards*-compliant.

Proposed historic rehabilitation actions allow for the continued protection and preservation of the NHL and its contributing spaces and character-defining features at each level of condition.

Operational Efficiency

See ‘Seismic Strengthening,’ above, for the impacts of proposed changes to the Kitchen.

Locker Room Modifications

Alternative 3, like Alternative 1, would provide a south Kitchen mezzanine that allows for new employee facilities (e.g., lockers, changing, breakroom, etc.) above the Kitchen.

Locker room modifications are linked to proposed actions within the Kitchen space. The locker room space is not architecturally articulated, although it is identified as a Contributing Historic Utilitarian space. The locker room modifications would occur in spaces that are essentially unmodified. This action would remove original partitions to accommodate a significant differential of nearly three feet along the floor where a proposed wheelchair lift would be added. The differential is between the area of the lift and the opposite (south) end, and there is a stair at the wall where the differential occurs.

By modifying the Kitchen to include a partial mezzanine, and correcting the differential along the floor, improved accessibility would be accommodated and operational goals can be met. In total, the configuration of the Kitchen and locker room spaces would not be substantially modified under Alternative 3.

Other Operational Efficiency Actions

Action items related to improving operational efficiency within The Ahwahnee include improvements to maintenance facilities and storage spaces as well as upgrades to electrical and mechanical systems. More extensive operational efficiency tasks include reconfiguration of the Gift Shop/Retail Storage space. Alternative 3 would also waterproof the basement, which would allow for fire safety and improved conditions in the historic structure.

Visitor Experience and Visitor Services

Visitor experience and/or visitor service actions involving features related to historic fabric or actions located near historic spaces and features would include: removal of non-historic additions and finishes, rehabilitation of historic finishes at the Dining Room service bar, and remodeling at the Ahwahnee Bar. In addition, the lobby and guest arrival experience would be altered with the removal of the built-in counter and a provision of a moveable desk for the concierge near the Sweet Shop. Mechanical changes would be made to maintain capacity and improve heating and cooling in guestrooms. The non-historic passenger elevator would also be rehabilitated with design finishes and replacement fixtures of compatible historic character.

These actions would alter non-historic spaces, features, and materials. Rehabilitation of historic finishes at the wine bar and service bar would have a beneficial effect on the Dining Room.

Energy Efficiency

Energy efficiency actions involving features related to historic fabric or actions located near historic spaces and features would include: removal of existing aluminum guestroom windows and replacement with historically compatible, wood-framed, double-paned, insulated, low-e casement windows and refurbishing historic fixtures in ground floor public areas.

In addition, HVAC units in guestrooms would be replaced. The majority of existing HVAC units are located in existing guestroom soffits, with some installed in adjacent storage rooms. New HVAC units would be installed in the same locations and would not be visible to guests. The majority of the existing walls adjacent to the HVAC units were previously altered to metal stud and gypsum board construction during installation of the existing HVAC units. Any remaining historic fabric would be preserved to the greatest extent possible. Historic registers and register openings would be reused wherever feasible.

Landscape Actions

The proposed actions in the landscape outside of the hotel would allow the property to be code compliant for fire safety and also bring the property further into compliance with ADA-ABA requirements. None of the actions proposed would impact the integrity of the NHL or impact its contributing spaces and character-defining features.

Conclusion: Although the majority of proposed actions would not impact the characteristics that make The Ahwahnee eligible for inclusion on the NRHP, or diminish its integrity, as a whole Alternative 3 would result in an adverse effect to the historic property.

The 2011 Programmatic Agreement (Appendix A) would be implemented to resolve the adverse effect. In addition, NPS historical architects and the park historic preservation officer will continue to work with the project design team and SHPO to minimize the adverse effect on the historic property during and construction planning and implementation.

Alternative 3 would result in no adverse effect to the Yosemite Valley Historic District.

Cumulative Impacts

The list of past, present, and reasonably foreseeable actions that may affect the NHL and/or the Yosemite Valley Historic District is the same as under the No Action Alternative.

Cumulatively these actions, projects, and plans, when combined with Alternative 3 would result in an adverse effect on the historic property, but would not result in an adverse effect on the Yosemite Valley Historic District to which it contributes.

Archeological Resources

Affected Environment

Archeological sites located within the area of potential effect include CA-MRP-52/H, CA-MRP-291/751, and CA-MRP-292/293/H. The current significance assessment of archeological sites is provided in Table 3-5.

Table 3-5
Historic Significance Status of Archeological Sites in The Ahwahnee Comprehensive Rehabilitation Plan Project Area

Trinomial	Primary Number	National Register of Historic Places	National Historic Landmark	Yosemite Valley Historic District	The Ahwahnee Cultural Landscape
CA-MRP-52/H	P-22-000380	Contributor to the Yosemite Valley Archeological District	Unevaluated	Unevaluated	Unevaluated
CA- MRP-291/751	P-22-000605	Contributor to the Yosemite Valley Archeological District	Unevaluated	Unevaluated	Unevaluated
CA-MRP-292/293/H	P-22-000606	Contributor to the Yosemite Valley Archeological District	Unevaluated	Unevaluated	Unevaluated

Significance—CA-MRP-52/H

CA-MRP-52/H is a multicomponent archeological site that consists of a bedrock milling station, a light scatter of lithics, and a can dump. It was first recorded by California State University, Stanislaus (Napton and Greathouse 1974), was updated by NPS archeologists in 1986, and was reported in Kathleen Hull and Michael S. Kelly in 1995. According to the Cultural Sites Inventory Form (CSI) Field Data Sheet filled out for this site in 1995, it was recommended that the site be evaluated and that a literature search be conducted. Site data potential were recommended as moderate and extensive surface disturbances were noted. As a result, this site is considered to be potentially eligible for the National Register of Historic Places (NRHP) and is considered a contributor to the Yosemite Valley Archeological District until it has been formally evaluated.

Significance—CA-MRP-291/751

CA-MRP-291/751 is a prehistoric site consisting of bedrock milling stations and a lithic scatter. The site was first recorded by California State University, Stanislaus (Napton and Greathouse 1974) and was later updated by NPS archeologists during the Valley Electric Line monitoring project in 1986 (NPS 1986a). In 1992, the National Park Service updated the site documentation during the Valley Electric Rehabilitation project (NPS 1992a). Additional documentation provided by Hull et al. 1995 notes that the site should be evaluated; that it had an estimated high data potential; and that during the 1992 visit the condition of the site was fair, based on surface evidence only. According to site reports filled out in 2007, the site has been evaluated and is listed on the national register as a contributor to the Yosemite Valley Archeological District.

Significance—CA-MRP-292/293/H

CA-MRP-292/293/H is a multicomponent site consisting of bedrock milling stations, a midden, lithics, rock art, and subsurface historic features. The site was first recorded by California State University, Stanislaus (Napton and Greathouse 1974) and was later updated by NPS archeologists

during the Valley Electric Line monitoring project (NPS 1986b). In 1992, the National Park Service updated the site documentation during the Valley Electric Rehabilitation project (NPS 1992b). The 1992 site record indicates that previous test excavations were performed at this site by Baldrice in 1988. In 2001, the record was again updated to include an additional feature. Additional documentation provided by Hull et al. 1995 documents the 1988 archeological testing and indicates that prehistoric components of the site were evaluated for inclusion in the national register. Historic components of the site were evaluated by Nilsson, Beville, and Button in 2009 and are listed on the national register as a contributor to the Yosemite Valley Archeological District.

Environmental Consequences - Methodology

Prehistoric and historic archeological sites and districts are considered eligible for inclusion in the National Register of Historic Places when they are associated with events that have made a significant contribution to the broad patterns of our history (criterion A); when they are associated with the lives of persons significant in our past (criterion B); when they embody the distinctive characteristics of a type, period, or method of construction (criterion C); or when they have contributed or have the potential to contribute information about the past (criterion D). Prehistoric sites are usually evaluated for the national register under this latter criterion D because it is the information value contained in the spatial and temporal relationships of the artifacts, soils, features, and other constituents that is unique. Impacts on archeological resources occur when irreparable alteration of features or patterns, including destruction, diminishes the overall integrity of the data values or other resource values.

Archeological deposits might also have significance to associated American Indian peoples under other criteria; these possible aspects of significance have not been explored or evaluated. Any site treatment would involve consultation with tribal governments and representatives to ensure these other values are addressed, as stipulated in the programmatic agreement for this plan (see below).

This impact assessment assesses whether a proposed action affects the characteristics that might make a resource eligible for the National Register of Historic Places, along with other laws and regulations. The focus of this impact assessment is on the potential for new impacts on archeological resources as a result of the proposed actions. The types of actions that might affect archeological sites are ground-disturbing activities such as grading to level roads or trails, excavation for foundation work, or the addition of site drainage features. It is not possible to improve the condition of (have a beneficial impact on) an archeological resource.

If specific actions proposed might affect a given site's national register eligibility, especially under criterion D, then the protocols developed in the *Programmatic Agreement Between the National Park Service, Yosemite National Park, and the California State Historic Preservation Officer Regarding The Ahwahnee Hotel National Historic Landmark Comprehensive Rehabilitation Program* (2011 Programmatic Agreement) would be implemented.

Assessment of Adverse Effect

Please see page 3-5 for a discussion of how impacts on historic properties, including archeological resources, are evaluated under National Historic Preservation Act section 106 implementing regulations (36 CFR 800). In keeping with these regulations, the following criteria of adverse effect are applied to affected historic properties that are listed in or are eligible for listing in the National Register of Historic Places:

- **No Historic Properties Affected:** When there are no historic properties present, or the action will have no effect on historic properties, the action is said to have no effect on historic properties.
- **No Adverse Effect:** Occurs when there will be an effect on a historic property, but the action will not alter characteristics that make the property eligible for inclusion in the National Register of Historic Places in a way that would diminish the integrity of the property.
- **Adverse Effect:** Occurs when an action will alter, directly or indirectly, any of the characteristics of a historic property that qualify it for inclusion in the National Register of Historic Places, in a way that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects may include reasonably foreseeable effects caused by the action that may occur later in time, be farther removed in distance, or be cumulative.

Environmental Consequences of No Action Alternative

Analysis

Under the No Action Alternative, there would be no actions to bring The Ahwahnee further into compliance with current fire and life-safety code, seismic standards, and accessibility standards; no work to address operational or energy efficiencies; no work to address visitor experience issues; and none of the recommended historic rehabilitation actions would be pursued. Regular monitoring of archeological resources would continue to follow NPS cultural resource management guidelines.

Conclusion: The No Action Alternative proposes no ground disturbance, resulting in no adverse effect on individual archeological resources or the Yosemite Valley Archeological District.

Cumulative Impacts

In general, past development, operation, and maintenance of facilities throughout Yosemite National Park has protected and preserved the integrity of individual archeological sites and archeological districts. Current actions in the area that have been reviewed for the potential to contribute to impacts on the archeological sites and the Yosemite Valley Archeological District include the *Merced Wild and Scenic River Comprehensive Management Plan*, *Parkwide Invasive Plant Management Plan Update*, *Scenic Vista Management Plan*, *East Yosemite Valley Utilities Improvement Plan*, *The Ahwahnee Fire and Life-Safety Improvements Project*, and *The Ahwahnee Hotel Improve Porte Cochere Access Walkways and Fence Project*.

Implementation of these current and/or reasonably foreseeable future actions would have a potential adverse effect on individual archeological sites in the project area and the Yosemite Valley Archeological District. Specific impacts depend upon the nature, location, and design of the action. Application of current site-specific avoidance, minimization, and mitigation measures would avoid the potential for adverse effects on the individual archeological sites and the Yosemite Valley Archeological District. Potential adverse effects for cumulative plans and projects would be resolved through adherence to NPS cultural resource management guidelines, implementation of the park's 1999 Programmatic Agreement and/or the 2011 Programmatic Agreement for actions within The Ahwahnee Comprehensive Rehabilitation Plan, which stipulates application of the *Archeological Synthesis and Research Design* (Hull and Moratto 1999).

Environmental Consequences of Alternative 1

The majority of actions proposed under Alternative 1 would occur inside of The Ahwahnee hotel, cottages, and dormitory; would not entail ground disturbance; and would therefore not impact archeological resources. The following analysis addresses proposed actions that would have the potential for an adverse effect due to ground-disturbing activities.

Adverse effects would be resolved through adherence to NPS cultural resource management guidelines and implementation of the 2011 Programmatic Agreement (Appendix A), which stipulates application of the *Archeological Synthesis and Research Design* (Hull and Moratto 1999). In addition, an NPS archeologist and the park historic preservation officer would be consulted throughout project design and construction planning and implementation.

Analysis

Fire and Life-Safety

Code-required improvements to fire truck access around the exterior of the building would require moving the access off the concrete terrace of the hotel and ground disturbance to widen and lengthen the existing hardened area (currently covered by turf) to support fire truck loads. These activities would require excavation and grading within archeological site CA-MRP-292/293/H.

Code-required improvements to fire truck access to the cottages would require widening (in places), leveling, and graveling an existing gravel service road and unmaintained service road south of the cottages; replacement of culverts at drainage crossings; construction of a new crossing over the unnamed seasonal tributary east of the cottages; and construction of a new truck turnaround. These activities, which would require grading and excavation in previously disturbed areas, would occur within archeological site CA-MRP-291/751.

Code-required improvements to waterproofing at the hotel basement would include installation of a trench drain at the basement entry. Ground disturbance would occur within archeological site CA-MRP-292/293/H.

Accessibility

ADA-compliant access to the South Mezzanine meeting rooms would be provided by installing a limited-use/limited-access elevator. This action would require excavation to modify footings. Ground disturbance associated with this action would occur within archeological site CA-MRP-292/293/H.

Improvements on the path of travel to the wedding lawn would require minor grading to level the pathway within archeological site CA-MRP-292/293/H.

Operational Efficiency

The extension of consolidated utilities to the cottage area would require the excavation and construction of a new, approximately 4- to 5-foot-deep trench for a utility corridor underneath existing pathways within archeological sites CA-MRP-291/751 and CA-MRP-292/293/H.

Conclusion: Under Alternative 1, actions that would cause ground disturbance, including improvements to fire department access, accessibility, operational efficiency, and site drainage, would have the potential to result in an adverse effect on archeological sites CA-MRP-292/293/H and CA-MRP-291/751, as well as the Yosemite Valley Archeological District.

Potential adverse effects would be resolved through adherence to NPS cultural resource management guidelines and implementation of the 2011 Programmatic Agreement (Appendix A), which stipulates application of the *Archeological Synthesis and Research Design* (Hull and Moratto 1999). In addition, an NPS archeologist and the park historic preservation officer would be consulted throughout project design and construction planning and implementation.

Cumulative Impacts

Cumulative projects with the potential to cause an adverse effect on archeological sites in the project area would be the same under Alternative 1 as under the No Action Alternative. In conjunction with Alternative 1, there would be a cumulative potential adverse effect on archeological resources in the project area and the Yosemite Valley Archeological District.

Environmental Consequences of Alternative 2

The majority of actions proposed under Alternative 2 would occur inside of the hotel, cottages, and dormitory; would not entail ground disturbance; and would therefore not impact archeological resources. The following analysis addresses proposed actions that would have the potential for an adverse effect resulting from ground-disturbing activities.

Adverse effects would be resolved through adherence to NPS cultural resource management guidelines, implementation of the 2011 Programmatic Agreement (Appendix A), and application of the *Archeological Synthesis and Research Design* (Hull and Moratto 1999). In addition, an NPS archeologist and the park historic preservation officer would be consulted throughout project construction planning and implementation.

Analysis

Fire and Life-Safety

In order to maintain public access to the South Mezzanine meeting rooms, a code-required second means of egress would be provided by adding an exterior exit from the Tresidder Room. Ground disturbance within archeological site CA-MRP-292/293/H would be required for installation of the exit.

Provision of a code-compliant means of egress at the east spiral stair would be accomplished by removing the existing stair and constructing an exterior staircase from the second floor to the ground level. Ground disturbance within archeological site CA-MRP-292/293/H would be required for installation of the new staircase.

Code-required improvements to fire truck access around the exterior of the building would require moving the access off the concrete terrace of the hotel and ground disturbance to widen and lengthen the existing hardened area (currently covered by turf) to support fire truck loads. These activities would require excavation and grading within archeological site CA-MRP-292/293/H.

Code-required improvements to fire truck access to the cottages would require widening (in places), leveling, and graveling an existing gravel service road and unmaintained service road south of the cottages; replacement of culverts at drainage crossings; construction of a new bridge over the unnamed seasonal tributary east of the cottages; and construction of a new truck turnaround. These activities, which would require extensive grading and excavation in previously disturbed areas, would occur within archeological site CA-MRP-291/751.

Code-required improvements to waterproofing at the hotel basement would include installation of a trench drain at the basement entry. Ground disturbance would occur within archeological site CA-MRP-292/293/H.

Seismic Strengthening

Reinforcement of the South Wing would require new footings installed below grade to support the proposed shear walls. Installation of shear walls would cause ground disturbance within archeological site CA-MRP-292/293/H.

Bracing the Dining Room from the Kitchen side would involve installing new footings to support columns in the crawlspace below the Kitchen. Excavation and installation of the footings would cause ground disturbance within archeological site CA-MRP-292/293/H.

Accessibility

ADA-compliant access to the South Mezzanine meeting rooms would be provided by installing a limited-use/limited-access elevator. This action would require excavation to modify footings. The ground disturbance associated with this action would occur within archeological site CA-MRP-292/293/H.

Improvements on the path of travel to the wedding lawn would require minor grading to level the pathway, which would occur within archaeological site CA-MRP-292/293/H.

Operational Efficiency

The extension of consolidated utilities to the cottage area would require the excavation and construction of a new, approximately 4- to 5-foot-deep trench for a utility corridor underneath existing pathways. These activities would occur within archeological sites CA-MRP-291/751 and CA-MRP-292/293/H.

Energy Efficiency

Alternative 2 proposes two different options for using geothermal technology to help supplement heating and cooling. In the first option, shallow geothermal tubes for preheating/cooling would be installed either below asphalt paths to cottages or below wooden walkways at the Entry Gallery and Porte Cochere. The tubing would be placed within existing utility corridors, thus installation of shallow geothermal tubes are not expected to impact archeological resources.

The other option under this action would be to use geothermal directional bore holes in the ground. The bore holes would be 6 to 8 inches in diameter and extend to a depth of greater than 40 feet. The locations of the holes would be determined pending further study. Depending on the location of the bore holes, the project could occur within archeological site(s) CA-MRP-52/H, CA-MRP-291/751, and/or CA-MRP-292/293/H.

Conclusion: Under Alternative 2, actions that would cause ground disturbance, including improvements to egress, fire department access, seismic strengthening, accessibility, operational efficiency, site drainage, and energy efficiency, would have the potential to result in an adverse effect on archeological sites CA-MRP-52/H, CA-MRP-292/293/H, and CA-MRP-291/751, as well as the Yosemite Valley Archeological District.

Potential adverse effects would be resolved through adherence to NPS cultural resource management guidelines and implementation of the 2011 Programmatic Agreement (Appendix A), which stipulates application of the *Archeological Synthesis and Research Design* (Hull and Moratto

1999). In addition, an NPS archeologist and the park historic preservation officer would be consulted throughout project design and construction planning and implementation.

Cumulative Impacts

The cumulative impact of Alternative 2 would be the same as under Alternative 1.

Environmental Consequences of Alternative 3 (Preferred Alternative)

The majority of actions proposed under Alternative 3 would occur inside of the hotel, cottages, and dormitory; would not entail ground disturbance; and would therefore not affect archeological resources. The following analysis addresses proposed actions that would have the potential for an adverse effect due to ground-disturbing activities.

Adverse effects would be resolved through adherence to NPS cultural resource management guidelines, implementation of the 2011 Programmatic Agreement (Appendix A), and application of the *Archeological Synthesis and Research Design* (Hull and Moratto 1999). In addition, an NPS archeologist and the park historic preservation officer would be consulted throughout project construction planning and implementation.

Analysis

Fire and Life-Safety

In order to maintain public access to the South Mezzanine meeting rooms, a code-required second means of egress would be provided by adding an exterior exit from the Tresidder Room. Ground disturbance within archeological site CA-MRP-292/293/H would be required for installation of the exit.

Code-required improvements to fire truck access around the exterior of the building would require moving the access off the concrete terrace of the hotel and ground disturbance to widen and lengthen the existing hardened area (currently covered by turf) to support fire truck loads. These activities would require excavation and grading within archeological site CA-MRP-292/293/H.

Code-required improvements to fire truck access to the cottages would require widening (in places), leveling, and graveling an existing gravel service road and unmaintained service road south of the cottages; replacement of culverts at drainage crossings; construction of a new crossing over the unnamed seasonal tributary east of the cottages; and construction of a new truck turnaround. These activities, which would require grading and excavation in previously disturbed areas, would occur within archeological site CA-MRP-291/751.

Code-required improvements to waterproofing at the hotel basement would include installation of a trench drain at the basement entry. Ground disturbance would occur within archeological site CA-MRP-292/293/H.

Seismic Strengthening

Reinforcement of the South Wing would require new footings installed below grade to support the proposed shear walls. Installation of shear walls would occur within archeological site CA-MRP-292/293/H.

Bracing the Dining Room from the Kitchen side would involve installing new footings to support columns in the crawlspace below the Kitchen. Excavation and installation of the footings would cause ground disturbance within archeological site CA-MRP-292/293/H.

Accessibility

ADA-compliant access to the South Mezzanine meeting rooms would be provided by installing a limited-use/limited-access elevator. This action would require excavation to modify footings. The ground disturbance associated with this action would occur within archeological site CA-MRP-292/293/H.

Improvements on the path of travel to the wedding lawn would require minor grading to level the pathway, within archeological site CA-MRP-292/293/H.

Operational Efficiency

The extension of consolidated utilities to the cottage area would require the excavation and construction of a new, approximately 4- to 5-foot-deep trench for a utility corridor underneath existing pathways. These activities would occur within archeological sites CA-MRP-291/751 and CA-MRP-292/293/H.

Conclusion: Under Alternative 3, actions that would cause ground disturbance, including improvements to fire department access, seismic strengthening, accessibility, operational efficiency, and site drainage, would have the potential to result in an adverse effect on archeological sites CA-MRP-292/293/H and CA-MRP-291/751, as well as the Yosemite Valley Archeological District.

Potential adverse effects would be resolved through adherence to NPS cultural resource management guidelines and implementation of the 2011 Programmatic Agreement (Appendix A), which stipulates application of the *Archeological Synthesis and Research Design* (Hull and Moratto 1999). In addition, an NPS archeologist and the park historic preservation officer would be consulted throughout project design and construction planning and implementation.

Cumulative Impacts

The cumulative impact of Alternative 3 would be the same as under Alternative 1.

American Indian Traditional Cultural Resources**Affected Environment**

The project area contains resources of prehistoric, historic, and contemporary significance to American Indian tribes and groups. The ancient American Indian village of Wis-kah-lah, first documented by Stephen Powers in the 1870s (Powers, published 1977), was located at the base of Royal Arches. The former village site is thought to lie partially within the area of potential effect for this project. At the time, it was the farthest east settlement in Yosemite Valley. Later, the village was recorded as a large summer camp a little west of the Royal Arches, partially overlain in its western portion by the stables complex known as Kenneyville (Merriam 1917).

As noted above under ‘Archeological Resources’ and in Table 3-5, three American Indian archeological sites on The Ahwahnee grounds have been recorded in the area of potential effect: CA-MRP-52/H, CA-MRP-292/293/H, and CA-MRP-291/751. These sites most likely include the surviving remains of the village of Wis-kah-lah. Various archeological studies have been conducted that indicate use of the site for approximately 7,000 years, with intensive use in late prehistory (the period of time just prior to Euro-American contact in Yosemite) (Nilsson et al. 2009). There is evidence that Wis-kah-lah was occupied until the mid-nineteenth century (Bunnell published 1990).

Historic-era construction at the site of Wis-kah-lah included Kenneyville, a stables complex of 17 wood-frame structures, in 1886 (Pavlik 1986). Prior to the construction of Kenneyville, James C. Lamon's homestead (1869-1875) and the Royal Arch farm and the Harris Campground (1876-1888) occupied the site (Greene 1987). Kenneyville was displaced by The Ahwahnee hotel in 1926.

Ethnographer John Hudson was told by American Indian informants that there was a great battle at the base of Royal Arches, and he recorded in his field journal that "the Yosemite" were nearly exterminated by the eastern people, the Paiute (Hudson 1901). The date of the battle is not known, but the battle took place within living memory of Hudson's informants.

Vegetation in the project area is a landscaped mixture of native and ornamental species. A number of native plants were brought to the site as ornamental plantings (e.g., sequoias and California black oaks), and some non-native plants (e.g., European grasses) have been added to the grounds close to the structure. Himalayan blackberry, one of the most threatening invasive plants in Yosemite (NPS 2008b), has begun to encroach on some of the land, and native ponderosa pines appear to be encroaching as well.

American Indians gather native plants throughout Yosemite Valley; boundaries for gathering may change from year to year, depending upon the plant species, the weather, or other factors (Deur 2006). Gathering is not likely to occur at the landscaped grounds immediately adjacent to The Ahwahnee hotel. Examples of native species that may be gathered near the project area include basket grass (*Muhlenbergia rigens*), which is tended and gathered at Ahwahnee Meadow (Deur 2006). California black oak acorns (*Quercus kelloggii*) are the preferred and prized food nuts of American Indians who continue to gather acorns where they are available (Ortiz 1996). There are California black oaks in the project area. Medicinal plants and fungi may also be gathered in the vicinity when available (Bibby 1994). The specific species and locations of medicinal plants and fungi gathered are not normally disclosed by American Indians.

Consultation with American Indian Tribes and Groups

It is part of the National Park Service mission to facilitate the preservation and continuation of traditional cultural practices in Yosemite; park managers work to accommodate traditional cultural practices in accordance with the NPS mission and management policies. Consultation is a key component of the National Park Service's strategy to preserve and protect culturally significant resources that are central to traditional cultural practices.

The park consults with seven culturally associated American Indian tribes and groups on a regular basis. These are the American Indian Council of Mariposa County (also known as the Southern Sierra Miwuk Nation), Bishop Paiute Tribe, Bridgeport Paiute Indian Colony, Mono Lake Kutzadikaa Tribe, North Fork Rancheria of Mono Indians, Picayune Rancheria of the Chukchansi Indians, and the Tuolumne Band of Me Wuk Indians. For more information on American Indian consultation for this project, please see Chapter 4, Consultation and Coordination.

Environmental Consequences - Methodology

Potential impacts on traditional resources in the project area were analyzed qualitatively, based on current understanding of values and significant elements, and proposed modifications that could potentially alter character-defining features. Actions proposed were also assessed for the potential effect they might have on American Indian values at archeological sites.

Like other cultural resources, American Indian traditional resources might be eligible for the National Register of Historic Places when they are associated with significant events that have made a contribution to their history (criterion A); when they are associated with the lives of persons significant in the past, who may include important people in stories (criterion B); when they embody distinctive design characteristics (criterion C); or when they have contributed or have the potential to contribute information about the past (criterion D). Adverse impacts on American Indian traditional resources may include damage, alteration, destruction, isolation, neglect, deterioration, and other factors that might adversely affect the site's ability to convey the characteristics for which it was determined eligible to the national register. Traditional resources and practices might also be affected if the ability to access or use a particular place affects the way in which culturally associated American Indians connect to the resource. Such effects can include visual and aural intrusions as well as physical alterations.

Some of the places important to American Indians at The Ahwahnee are also prehistoric archeological sites, which are more fully described under 'Archeological Resources' above. The values ascribed to these resources by American Indian people might extend beyond scientific value (criterion D). American Indian connections to geographic locations may be strengthened by the presence of archeological remains left by their ancestors.

The National Park Service will facilitate the preservation and continuation of American Indian traditional resources and practices in consultation with culturally associated tribes and groups, and would implement measures in the 2011 Programmatic Agreement prepared for this project (Appendix A).

Environmental Consequences of the No Action Alternative

Analysis

The No Action Alternative would not result in any additional impacts on traditional cultural resources or practices.

Conclusion: There would be no new impacts on American Indian traditional resources and practices under the No Action Alternative.

Cumulative Impacts

There are a number of past projects and activities that have contributed to impacts on traditional resources important to American Indians and the continuation of traditional cultural practices. Historic-era activities, such as construction of the Lamon homestead and the stables at Kenneyville, included ground-disturbing actions and other effects on the American Indian village of Wis-kah-lah, including the displacement of the American Indian people themselves. The construction of The Ahwahnee hotel further impacted the footprint of the American Indian village. Subsequent projects related to infrastructure (e.g. roads, water, and sewer), use of the hotel and grounds by the U.S. Navy during World War II, employee housing, landscaping, and more actions have resulted in additional ground disturbance at the site.

The current and/or foreseeable actions listed in Appendix D would have the potential to affect the village site and the values held by American Indians for this ancestral place. Some of the undertakings, such as the *Merced Wild and Scenic River Comprehensive Management Plan*, are in process and it is not currently clear what, if any, effect they would have on the traditional cultural resources or practices at The Ahwahnee. There is the potential for ground disturbance of archeological deposits and removal of native vegetation, resulting in a potential adverse effect on

American Indian traditional resources and practices, as part of the *Scenic Vista Management Plan*, *2009 Fire Management Plan*, *East Yosemite Valley Utilities Improvement Plan*, *The Ahwahnee Fire and Life-Safety Improvements Project*, and *The Ahwahnee Hotel Improve Porte Cochere Access Walkways and Fence Project*.

Beneficial impacts on native plant communities of value to American Indians might result from the implementation of *Parkwide Invasive Plant Management Plan Update*.

It is anticipated that adverse impacts resulting from cumulative projects would be resolved through adherence to NPS cultural resource management guidelines and application of the 2011 Programmatic Agreement regarding rehabilitation projects at The Ahwahnee or the parkwide 1999 Programmatic Agreement for projects that are not part of The Ahwahnee Comprehensive Rehabilitation Plan (e.g., the *Scenic Vista Management Plan*).

Environmental Consequences of Alternatives 1, 2, and 3

The majority of actions proposed for the comprehensive rehabilitation of The Ahwahnee would occur within building footprints and would not affect American Indian traditional cultural resources. The proposed actions in the landscape at The Ahwahnee (outside of the hotel, cottages, and dormitory buildings) that might affect American Indian values would be the same with all action alternatives. Therefore, they are analyzed together.

Analysis

Removal of select native vegetation (incense cedars and herbaceous plants) as part of fire access road improvements and construction of a utility corridor might affect native plants of value to American Indians.

Impacts on values that make the archeological sites in the project area important to American Indians (including the remains of Wis-kah-lah and possibly the Royal Arches battle site) could include ground-disturbing activities for the code-required improvements to the fire department access road, including installation of new drainage crossings; installation of a new utility corridor beneath the pathways to the cottages; and excavation to place new footings for seismic strengthening at the hotel. There are three archeological sites within the project area of potential effect that are recorded as separate sites. It is possible that subsurface investigations might reveal a continuous archeological deposit that may extend between and beyond the currently documented site boundaries. Furthermore, the archeological site boundaries are not always synonymous with the extent of an American Indian traditional cultural resource. Ongoing consultation and cultural monitoring, as provided for in the 2011 Programmatic Agreement for actions covered in this planning effort, would identify the potential for additional impacts and address mitigation of their effects.

In accordance with the 2011 Programmatic Agreement (Appendix A), American Indian representatives from culturally associated tribes and groups would be provided an opportunity to participate in activities, including archeological investigations and construction monitoring, for the protection of resources to which they attach cultural, spiritual, and traditional significance that might be affected by project implementation.

Conclusion: Traditional cultural resources of value to American Indians might be affected by construction, removal of select native vegetation, and alteration of archeological constituents. The park would continue consultation with culturally associated tribes and groups during project

planning and implementation, and would implement the 2011 Programmatic Agreement in order to protect resources to which American Indian tribes and groups attach cultural values.

Cumulative Impacts

The cumulative impacts of Alternatives 1, 2, and 3 in conjunction with the past, present, and/or reasonably foreseeable projects (listed under the No Action Alternative) might result in an adverse effect on resources of value to American Indians. It is anticipated that adverse effects would be resolved by application of the 2011 Programmatic Agreement regarding rehabilitation projects at The Ahwahnee hotel or the parkwide 1999 Programmatic Agreement for projects that are not part of The Ahwahnee Comprehensive Rehabilitation Plan (e.g., the *Scenic Vista Management Plan*).

Chapter 4: Consultation and Coordination

This chapter presents a review of all consultation and coordination efforts undertaken for The Ahwahnee Comprehensive Rehabilitation Plan Environmental Assessment.

Project Scoping History

A 45-day public scoping period for The Ahwahnee Comprehensive Rehabilitation Plan Environmental Assessment was initiated on August 13, 2009 and was subsequently extended through September 30, 2009. Two public meetings with a focus on this planning effort were held during the public scoping period: a Park Public Open House at the East Auditorium in Yosemite Valley on August 26, 2009, and a public scoping meeting at The Ahwahnee on September 22, 2009. The purpose of these meetings was to inform interested parties about the proposed project and solicit comments from members of the public in order to understand the spectrum of concerns, interests, and issues that should be considered in the planning process. In addition, information about the project was also displayed and public comments were accepted at an informal public meeting at The Ahwahnee on September 8, 2009 and at the Park Public Open House on September 30, 2009 at the East Auditorium in Yosemite Valley.

Comments were invited for submission by mail, fax, email, through the web-based Planning, Environment, and Public Comment (PEPC) system, and on comment forms that were made available during public scoping meetings. During the scoping period, the National Park Service received eight letters from seven individuals and one organization. An analysis of these letters identified 21 discrete comments, from which 18 general concern statements were generated.

Based on internal and public scoping comments and applicable federal law, regulations, and executive orders, the National Park Service determined that an environmental assessment would be the appropriate level of compliance for The Ahwahnee Comprehensive Rehabilitation Plan. Public scoping comments and issues raised by National Park Service staff were used in the alternatives development process and the analysis presented in this environmental assessment.

In addition, the National Park Service conducted targeted scoping for this planning effort in January 2010 to California museums, historical societies, and preservation groups, soliciting their input on the comprehensive planning process. No comments were received.

Agency Consultation

U.S. Fish and Wildlife Service

The Endangered Species Act of 1973, as amended (16 USC 1531 et seq.) requires all federal agencies to consult with the U.S. Fish and Wildlife Service to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitat. The National Park Service obtained a list of federally listed endangered and threatened species that may be present in The Ahwahnee area in November 2009 from the U.S. Fish and Wildlife Service. This list was used as the basis for the special status species analysis in this environmental assessment. The U.S. Fish and Wildlife Service will receive a copy of this environmental assessment and consultation with the U.S. Fish and Wildlife Service will continue, as defined by section 7 of the Endangered Species Act, as environmental compliance for The Ahwahnee Comprehensive Rehabilitation Plan is finalized.

Historic Preservation Agencies

During the initial phases of project planning in 2009, the National Park Service determined that the proposed rehabilitation project would have the potential to affect The Ahwahnee National Historic Landmark and the Yosemite Valley Historic District, as defined in 36 CFR part 800.16(i). Accordingly, the park initiated consultation with the California State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation (ACHP), and the National Trust for Historic Preservation (NTHP) in September 2009.

During the development of the comprehensive rehabilitation plan, the National Park Service consulted with the SHPO and the ACHP pursuant to the *1999 Programmatic Agreement Among the National Park Service at Yosemite, The California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Planning, Design, Construction, Operations, and Maintenance, Yosemite National Park, California* (1999 Programmatic Agreement) and regulations at 36 CFR 800 for implementing section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470f).

California State Historic Preservation Officer

The National Park Service initiated consultation with the SHPO in September 2009. In August 2010, the National Park Service submitted 100% conceptual drawings and 50% schematic drawings of the comprehensive rehabilitation plan alternatives for SHPO consideration and review. Following this submittal, the SHPO conducted a site visit to review project alternatives and consult with the National Park Service regarding the identification of the preferred alternative in October 2010. In December 2010, the SHPO submitted a letter outlining concerns with specific items included in the preferred alternative of the comprehensive rehabilitation program. These concerns were resolved by the National Park Service and SHPO verbally, by phone, on December 29, 2010, and were further documented in a written response from the National Park Service to the SHPO in January 12, 2011.

Because the comprehensive rehabilitation program will have an adverse effect on The Ahwahnee National Historic Landmark and has the potential to affect archeological sites that contribute to the Yosemite Valley Archeological District, the National Park Service and the SHPO have entered into a programmatic agreement, pursuant to 36 CFR 800.14(b) (see Appendix A). The programmatic agreement was released for public review on January 4, 2011 and a targeted letter was sent to California museums, historical societies, and preservation groups providing notification of the development of the agreement and requesting comment. No comments were received. The programmatic agreement was signed by the National Park Service and SHPO on January 24, 2011. The National Park Service will continue to consult with SHPO per the 2011 programmatic agreement.

Advisory Council on Historic Preservation

The National Park Service initiated consultation with the ACHP in September 2009. The ACHP subsequently acknowledged receipt of NPS communication and requested that the National Park Service notify the ACHP of a determination of adverse effect and provide adequate documentation for review. Accordingly, the National Park Service provided notification and supporting documentation regarding the development of a programmatic agreement for this planning effort pursuant to 36 CFR 800.14(b) on November 23, 2010. Based upon the information provided, the ACHP concluded that Appendix A, Criteria for Council Involvement in Reviewing Individual Section 106 Cases, of ACHP regulations, “Protection of Historic Properties” (36 CFR

Part 800), does not apply to this planning effort and the ACHP therefore declined to participate in the development of the programmatic agreement on December 15, 2010.

Pursuant to 36 CFR 800.6(b)(1)(iv), the National Park Service has filed the final programmatic agreement and related documentation with the ACHP.

National Trust for Historic Preservation

The National Park Service initiated consultation with the NTHP in September 2009. In addition, the National Park Service provided notification and supporting documentation regarding the development of a programmatic agreement for this planning effort pursuant to 36 CFR 800.14(b), on November 23, 2010. The NTHP verbally acknowledged the NPS communication and declined to participate in the development of a programmatic agreement on December 6, 2010.

American Indian Tribes and Groups

Yosemite National Park is consulting with American Indian tribes and groups having cultural association with The Ahwahnee area, including the Mono Lake Kutzadika'a Tribe, the North Fork Rancheria of Mono Indians, the Bridgeport Paiute Indian Colony, the Picayune Rancheria of Chukchansi Indians, the Tuolumne Band of Me-Wuk Indians, the Bishop Paiute Tribe, and the American Indian Council of Mariposa County, Inc. (Southern Sierra Miwuk Nation), on proposed actions under The Ahwahnee Comprehensive Rehabilitation Plan.

Consultation with these tribes and groups regarding this planning effort was initiated in September 2009 through written correspondence. The National Park Service discussed The Ahwahnee Comprehensive Rehabilitation Plan during government-to-government consultations with the tribes and groups at yearly, quarterly, and monthly tribal meetings in late 2009 and early 2010. Consultation continues during the planning process as described below.

Each of the tribes and groups above were provided with a letter dated January 5, 2011 inviting their participation as a concurring party to the programmatic agreement for this project, with an attached copy of the draft programmatic agreement for their consideration. On February 23, 2011, a consultation meeting was held as requested with the Tuolumne Band of Me-Wuk Indians to discuss the programmatic agreement. On February 24, 2011, the North Fork Rancheria of Mono Indians signed the programmatic agreement as a concurring party.

In addition, a copy of the administrative review draft of this environmental assessment was provided to the American Indian tribes and groups for review and comment in February 2011. Comments were received from The Bishop Paiute Tribe and the North Fork Rancheria of Mono Indians of California and were considered during the preparation of this assessment for public review.

The American Indian tribes and groups will also receive copies of this environmental assessment for review and comment. Consultation and partnering will continue with the American Indian tribes and groups throughout the planning and implementation of The Ahwahnee Comprehensive Rehabilitation Plan.

Future Information

Updated information about various aspects of The Ahwahnee Comprehensive Rehabilitation Plan will be periodically distributed via electronic newsletters, mailings, the project website (http://www.nps.gov/yose/parkmgmt/ahwahnee_rehab.htm), and regional and local news media.

There will be a 30-day public comment period on this environmental assessment. Please refer to the project web page for the exact comment review close and end dates.

Readers are encouraged to submit comments electronically through the NPS Planning, Environment and Public Comment (PEPC) system. A link to PEPC can be found on the project website, above, or directly at <http://parkplanning.nps.gov/AhwahneeRehab>.

Written comments regarding this document should be postmarked by the end of the review period and directed to:

Superintendent, Yosemite National Park
ATTN: The Ahwahnee Comprehensive Rehabilitation Plan
P.O. Box 577
Yosemite, California 95389
Fax: 209-379-1294

To request a printed copy or CD of this environmental assessment (available in limited quantity), please email: Yose_Planning@nps.gov.

List of Agencies, Organizations, and Businesses that Received The Ahwahnee Comprehensive Rehabilitation Plan Environmental Assessment

Advisory Council on Historic Preservation

American Indian Council of Mariposa County, Inc. (Southern Sierra Miwuk Nation)

Atwater Historical Society

Bassett Memorial Library

Bishop Paiute Tribe

Bodie State Historical Park

Bridgeport Paiute Indian Colony

California Preservation Foundation

Castle Air Museum

Central Sierra Historical Society

Clovis-Big Dry Creek Historical Society

Coarsegold Historical Society

Columbia State Historic Park

Delaware North Companies Parks and Resorts at Yosemite

El Portal Public Library

Forestiere Underground Gardens

Fresno Art Museum

Fresno City & County Historical Society

Gustine Museum

Madera County Historical Society

Mariposa County Public Library

Mariposa County Visitors Bureau/Board of Supervisors

Mariposa Museum and History Center

Merced County Historical Society

Meux Home Museum

Milliken Museum

Mono Lake Kutzadika'a Tribe

National Park Service, Pacific West Region

National Park Service, Yosemite National Park Archives

National Park Service, Yosemite National Park Research Library

National Trust for Historic Preservation

North Fork Rancheria of Mono Indians of California

Northern Mariposa County History

Oakhurst Public Library

Picayune Rancheria of Chukchansi Indians

Railtown 1897 State Historic Park

Reedley Historical Society/Museum

Sierra Mono Museum

Society for California Archaeology

Society of Architectural Historians

The California Historical Society

The Discovery Center

Tuolumne County Historical Society

Tuolumne Band of Me-Wuk Indians

U.S. Fish and Wildlife Service

Yosemite Committee Tehipite Chapter of the Sierra Club

THIS PAGE INTENTIONALLY LEFT BLANK

Chapter 5: List of Preparers

The following persons were primarily responsible for preparing and reviewing this environmental assessment.

Name	Responsibility	Education	Years Experience
YOSEMITE NATIONAL PARK TECHNICAL EXPERTS AND CONTRIBUTORS			
Jonathan Bayless	Museum Curator	M.S. Evolutionary Biology B.S. Biology	30 NPS
Tony Brochini	Division Liaison, Facilities Management	2 yrs. undergraduate studies	33 NPS
Sueann Brown	Former Historical Architect, History, Architecture and Landscapes; Resources Management and Science Division	M.S. Historic Preservation B.A. Architecture	24 NPS
Larry Carter	Capital Improvement Fund Project Coordinator, Business and Revenue Management Division	B.A. Administration	1 NPS 25 other
Don Coffman	Fire Marshal	Fire Science, Emergency Management	17 NPS 13 Other
Jim Donovan	Planning Division Liaison	M.A. Urban & Regional Planning B.A. Fine Arts	11 NPS 15 other
Randy Fong	Branch Chief, Design; Project Management Division	B.A. Architecture M. Architecture	32 NPS 1 other
Gabrielle Harlan	Historical Architect	PhD Candidate History of Art and Architecture M.A. Architectural History B.Arch. Architecture	2 NPS 12 other
Jennifer Hardin	Park Cultural Anthropologist and American Indian Liaison	M.S. Applied Anthropology M.A. Cultural Anthropology	2 NPS 13 other
Dave Humphrey	Branch Chief, History, Architecture, and Landscapes; Resources Management and Science Division	B.S. Landscape Architecture	21 NPS, 9 other
Laura Kim	Branch Chief: Anthropology; Resources Management and Science Division	Graduate studies in Historic Preservation B.S. Anthropology	27 NPS
Elaxis Mayer	Branch Chief, Environmental Planning and Compliance; Project Management Division	B.S. Natural Resources Planning	7 public 2 other
Kevin McCardle	Historical Landscape Architect	M.L.A. M.S. Microbiology B.S. Science Education	1 NPS 11 other
Sonny Montague	Project Archeologist	M.A. Anthropology B.S. Anthropology	20 NPS 4 other
Jim Roche	Park Hydrologist	M.S. Geology B.S. Chemistry	8 NPS 3 other
Madelyn Ruffner	Compliance Specialist	M.P.P. Public Policy	6 NPS 5 Other
Bill Rust	Civil Engineer, Business and Revenue Management Division	M.S. Civil Engineering B.S. Civil Engineering	27 NPS 10 Private
Jeannette Simons	Former Park Historic Preservation Officer and American Indian Liaison	M.A. Anthropology B.A. Anthropology	14 Public 14 Private
Steve Thompson	Branch Chief: Wildlife Management; Resources Management and Science Division	M.S. Ecology – Wildlife B.S. Biology	21 NPS 5 other

Name	Responsibility	Education	Years Experience
DELAWARE NORTH COMPANIES PARKS AND RESORTS AT YOSEMITE			
Daniel R. Jensen	President	Masters Degree in Business Administration	41 Private
Dave Armon, CPA	Vice President - Finance	B.A. Accounting	14 Private
Chance Jorgensen	Ahwahnee Hotel Manager		
Steve Ullmann	Director of Facility Services		39 Private
Brian Fulce	Capital Improvement Fund Project Manager	B.S. Civil Engineering	15 Private
Don Evans	Project Manager		
Vicki McMichael	Manager of Compliance and Client Relations	B.A. Recreation Administration	15 Private
Devon Rothell	Environmental Compliance Manager	B.A. Cultural Anthropology	7 Private
URS CORPORATION			
Kinzie Gordon	NPS Project Manager	B.A. Anthropology	2 NPS (as contractor) 36 Private
NEWFIELDS, LLC - PRIME CONTRACTOR			
Gary Hayward	Project Director	M.S. Marine Science B.A. Geology	28 Private
Ali Baird	Project Manager	M.A. Geography B.S. Conservation Biology	6 Public 10 Private
Adam Hamburg	Compliance Specialist	B.S. Environmental Sciences	5 Private
Andrea Schmid	Compliance Specialist	M.S. Natural Resource Ecology/Journalism and Communications B.S. Horticulture	6 Private
Wendy Vittands	Senior Compliance Specialist	B.S. Environmental Science	10 Public 2 Private
DOWL HKM			
Michela Spitz	Public Involvement Coordinator	B.A. Social Policy & Journalism	8 Private
Maryellen Tuttell	Socioeconomics	M.S. Food & Resource Economics B.S. Food & Resource Economics	8 Public 15 Private
HRA AND ASSOCIATES			
Lynn Compas	Associate Archeologist	M.A. Cultural Resource Management B.S. Anthropology Minor Geology	20 Public and Private
Erica Kachmarsky	Senior Project Architectural Historian	M.A. Preservation Studies B.A. Anthropology/Archeology	10 Private
HORNBERGER + WORSTELL			
Stephen Li	Architect	B.A. Architecture	8 Private
INDIVIDUAL SUBCONTRACTORS			
Shelly Davis-King, Davis-King and Assoc.	American Indian Traditional Cultural Resources and Practices	B.A. Anthropology M.A. Anthropology Additional graduate studies in Archeology	42 Private
Robert Wurgler, Cardno ENTRIX	Document Layout and Production Coordinator	B.A. Graphic Design	19 Private
Erin Adams, Cardno ENTRIX	Production Assistant	B.S. Environmental Science w/Applied Ecology	3 Private

Chapter 6: Glossary and Acronyms

Glossary of Terms

Affected environment: Existing natural, cultural, and social conditions of an area that are subject to change, both directly and indirectly, as a result of a proposed human action.

Alternatives: Sets of management elements that represent a range of options for how, or whether to proceed with a proposed project. An environmental assessment analyzes the potential environmental and social impacts of the range of alternatives presented, as required under the National Environmental Policy Act (NEPA).

Archeological resources: Historic and prehistoric deposits, sites, features, structure ruins, and anything of a cultural nature found within, or removed from, an archeological site.

Area of potential effect: The geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist. The area of potential effect is influenced by the scale and nature of the undertaking and may be different for different kinds of effects caused by the undertaking.

Best management practices: Effective, feasible (including technological, economic, and institutional considerations) conservation practices and land- and water-management measures that avoid or minimize adverse impacts to natural and cultural resources. Best management practices may include schedules for activities, prohibitions, maintenance guidelines, and other management practices.

CEQ Regulations: The Council on Environmental Quality (CEQ) was established by the National Environmental Policy Act (NEPA) and given the responsibility for developing federal environmental policy and overseeing the implementation of NEPA by federal agencies.

Cultural landscape: “A geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.” There are four general types of cultural landscapes, not mutually exclusive: *historic sites*, *historic designed landscapes*, *historic vernacular landscapes*, and *ethnographic landscapes*. (Preservation Brief 36)

Cultural Landscapes Inventory: The Cultural Landscapes Inventory (CLI) is a database containing information on the historically significant landscapes within the National Park System. This evaluated inventory identifies and documents each landscape’s location, size, physical development, condition, landscape characteristics, character-defining features, as well as other valuable information useful to park management.

Cultural Landscape Report: A Cultural Landscape Report (CLR) is the primary report that documents the history, significance and treatment of a cultural landscape. A Cultural Landscape Report evaluates the history and integrity of the landscape including any changes to its geographical context, features, materials, and use. Cultural Landscape Reports are often prepared with a change to a landscape is proposed. In such instances, a Cultural Landscape Report can be a useful tool to protect the landscape’s character-defining features from undue wear, alteration or loss, and can provide managers, curators, and others with information needed to make management decisions. (Preservation Brief 36)

Decibel: A unit of measure of sound intensity.

Ecosystem: An ecosystem can be defined as a geographically identifiable area that encompasses unique physical and biological characteristics. It is the sum of the plant community, animal community, and environment in a particular region or habitat.

Environmental assessment: A public document required under the National Environmental Policy Act (NEPA) that identifies and analyzes activities that might affect the human and natural environment. An environmental assessment is a concise public document which provides sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS), aids an agency's compliance with NEPA when no EIS is necessary, and it facilitates preparation of an EIS when one is necessary.

Environmental consequences: This section of an environmental assessment describes the impacts a proposed action will have on resources. Direct, indirect, and cumulative impacts, both beneficial and adverse, are analyzed. The context, duration, and intensity of impacts are defined and quantified as much as possible.

Environmentally preferable alternative: The environmentally preferable alternative is the alternative within the range of alternatives presented in an environmental assessment that best promotes the goals of the National Environmental Policy Act (NEPA). In general, this is the alternative causes the least damage to the environment and best protects natural and cultural resources. In practice, one alternative may be more preferable for some environmental resources while another alternative may be preferable for other resources.

Facilities: Buildings and the associated supporting infrastructure such as roads, trails, and utilities.

Finding of No Significant Impact (FONSI): The public document describing the decision made on selecting the "preferred alternative" in an environmental assessment. See "environmental assessment."

Floodplain: A nearly level alluvial plain that borders a river or stream and is subject to flooding unless protected artificially.

Geologic Hazard (Geohazard): Geohazards are any geological or hydrological process that poses a threat to people and/or their property.

Historic building: For the purposes of the National Register of Historic Places, a building can be a house, barn, church, hotel, or similar construction, created principally to shelter human activity. "Building" may also refer to a historically and functionally related unit, such as a courthouse and jail or a house and barn.

Historic district: A historic district is an area which possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development. To be eligible for the National Register of Historic Places, a district must be significant, as well as being an identifiable entity. It must be important for historical, architectural, archeological, engineering, or cultural values.

Historic property: A historic property is any prehistoric or historic building, site, district, structure, or object that is included in, or eligible for inclusion in, the National Register of Historic Places. Types of historic properties can include archeological sites, historic cultural landscapes, and traditional cultural properties (listed as sites, buildings, or districts).

Historic site: A historic site is the location of significant event which can be prehistoric or historic in nature. It can represent activities or buildings (standing, ruined, or vanished). It is the

location itself which is of historical interest in a historic site, and it possesses cultural or archeological value regardless of the value of any structures that currently exist on the location. Examples of sites include shipwrecks, battlefields, campsites, natural features, and rock shelters.

Historic structure: For the purposes of the National Register of Historic Places, the term “structure” is used to distinguish from buildings those functional constructions made usually for purposes other than creating human shelter. Examples of structures include bridges, gazebos, and highways.

Implementation plan: Implementation plans, which tier off of programmatic plans (like the *General Management Plan*) and focus on how to implement an activity or project needed to achieve a long-term goal. Implementation plans may direct specific projects as well as ongoing management activities or programs. They provide a more extensive level of detail and analysis than do general management plans. Implementation plans are required to undergo NEPA review.

Mitigation: Activity that will avoid, reduce the severity of, or eliminate an adverse environmental impact.

National Environmental Policy Act (NEPA): The federal act that requires the development of an Environmental Impact Statement for federal actions that might have substantial environmental, social, or other impacts.

National Historic Preservation Act (NHPA): The federal action that requires federal agencies to take into account the effect of any undertaking on historic properties (see ‘Historic Property,’ above).

National Park Service Management Policies: A policy is a guiding principle or procedure that sets the framework and provides direction for management decisions. NPS policies are guided by and consistent with the Constitution, public laws, Executive proclamations and orders, and regulations and directives from higher authorities. Policies translate these sources of guidance into cohesive directions. Policy direction may be general or specific. It may prescribe the process by which decisions are made, how an action is to be accomplished, or the results are to be achieved. The primary source of NPS policy is the publication *Management Policies 2006*. The policies contained therein are applicable Service-wide. They reflect National Park Service management philosophy. Director's Orders supplement and may amend the *Management Policies*. Unwritten or informal “policy” and people’s various understandings of National Park Service traditional practices are never relied on as official policy.

Natural processes: All processes such as hydrologic, geologic and ecosystemic, which are not the result of human manipulation.

No Action Alternative: The alternative in a plan that proposes to continue current management direction. “No action” means the proposed activity would not take place, and the environmental effects resulting from taking no action would be compared with the effects of permitting the proposed activity or an alternative activity to go forward.

Nonattainment Area: A geographical area identified by the U.S. Environmental Protection Agency and/or the California Air Resources Board as not meeting national and/or California ambient air quality standards (NAAQS / CAAQS) for a given pollutant.

Non-native species: Species of plants or wildlife that are not native to a particular area and often interfere with natural biological systems.

Organic Act: In 1916, the National Park Service Organic Act established the National Park Service in order to “promote and regulate use of parks. . .” and defined the purpose of the national parks as “to conserve the scenery and natural and historic objects and wild life therein and to provide for the enjoyment of the same in a manner and by such means as will leave them unimpaired for the enjoyment of future generations.” This law provides overall guidance for the management of Yosemite National Park.

Planning: An interdisciplinary process for developing short-term and long-term goals for visitor experience, resource conditions, and facility placement.

Preferred alternative: The preferred alternative is the alternative within the range of alternatives presented in an environmental assessment that the agency believes would best fulfill the purpose and need of the proposed action. While the preferred alternative is a different concept from the environmentally preferable alternative, they may also be one and the same for some environmental assessments.

Programmatic plan: Programmatic plans establish broad management direction for Yosemite National Park. The 1980 *General Management Plan* is a programmatic plan with a purpose to set a “clearly defined direction for resource preservation and visitor use” and provide general directions and policies to guide planning and management in the park. Programmatic plans are required to undergo NEPA review.

Public comment process: The public comment process is a formalized process required by the National Environmental Policy Act (NEPA) in which the National Park Service must publish a Notice Of Availability in the *Federal Register* which provides public notice that a draft environmental assessment and associated information, including scoping comments and supporting documentation, is available for public review and input pursuant to the Freedom Of Information Act.

Rehabilitation: The act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical or cultural values.

Riparian area: The land area and associated vegetation bordering a stream or river.

Rockfall: Newly detached bedrock falling rapidly from a cliff or other steep surface.

Special status species: Species of plants or wildlife that receive special protection under state and/or federal laws (also referred to as “listed species” or “endangered species”), and state, local, and park sensitive species that may not be protected by law.

Traditional cultural resource: Any site, structure, object, landscape, or natural resource feature assigned traditional, legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it.

Traditional cultural property: Traditional cultural resource that is eligible for or listed on the National Register of Historic Places as a historic property

Treatment: Work carried out to achieve a historic preservation goal. The four primary treatments are *preservation*, *rehabilitation*, *restoration*, and *reconstruction* (as stated in the Secretary of the Interior’s *Standards for the Treatment of Historic Properties*).

Visitor experience: The perceptions, feelings, and reactions a park visitor has in relationship with the surrounding environment.

Visitor use: Refers to the types of recreation activities visitors participate in, numbers of people in an area, their behavior, the timing of use, and distribution of use within a given area.

Wetland: Wetlands are defined by the U.S. Army Corps of Engineers (CFR, section 328.3[b], 1986) as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands are defined by the USFWS as transitional lands between terrestrial and aquatic systems, where the water table is usually at or near the surface or the land is covered by shallow water.

Acronyms

ACHP	Advisory Council on Historic Preservation
ABA	Architectural Barriers Act
ADA	Americans with Disabilities Act
AIRFA	American Indian Religious Freedom Act
ARPA	Archaeological Resources Protection Act
BSE	Base Safety Earthquake
CARB	California Environmental Protection Agency, Air Resources Board
CBC	California Building Code
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CHBC	California Historic Building Code
CIF	Capital Improvement Fund
CLI	Cultural Landscape Inventory
CLR	Cultural Landscape Report
CMC	California Mechanical Code
CPC	California Plumbing Code
dB	Decibel
dBA	Decibel (on the “A-weighted” scale)
DNC	Delaware North Companies Parks and Resorts at Yosemite, Inc.
DO	Director’s Order
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	United States Environmental Protection Agency
FONSI	Finding of No Significant Impact
HSR	Historic Structures Report
IBC	International Building Code
ICSSC	International Committee on Seismic Safety in Construction
MEP	Mechanical, Electrical, and Plumbing
NAGPRA	Native American Graves Protection and Repatriation Act
NEC	National Electric Code
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NPS	National Park Service
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
NPS	National Park Service
PEPC	Planning, Environment, and Public Comment
PM	Particulate Matter
SHPO	State Historic Preservation Officer
TOT	Transit Occupancy Taxes
UFAS	Uniform Federal Accessibility Standards
USACE	U.S. Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

Chapter 7: Bibliography

AECOM and Architectural Resources Group (ARG)

- 2011 *The Ahwahnee Cultural Landscape Report; 100% Draft*. Prepared for: National Park Service, Yosemite National Park and Delaware North Companies Parks and Resorts at Yosemite, May.

Anderson, Marion Kathleen

- 1988 *Southern Sierra Miwok Plant Resource Use and Management of the Yosemite Region: A Study of the Biological and Cultural Bases for Plant Gathering, Field Horticulture, and Anthropogenic Impacts on Sierra Vegetation*. Unpublished Master's Thesis in Wildland Resource Science, Graduate Division, University of California, Berkeley.
- 1993 *Indian Fire-Based Management in the Sequoia-Mixed Conifer Forests of the Central and Southern Sierra Nevada*. Final Report Submitted to Yosemite Research Center, Yosemite National Park, California.
- 2005 *Tending the Wild, Native American Knowledge and the Management of California's Natural Resources*. University of California Press, Berkeley.

Architectural Resources Group (ARG)

- 2011 *The Ahwahnee Historic Structures Report*. Prepared for the National Park Service, Yosemite National Park and Delaware North Companies Parks and Resorts at Yosemite, January.

Bates, Craig D., and Martha J. Lee

- 1990 *Tradition and Innovation. A Basket History of the Indians of the Yosemite-Mono Lake Area*. Yosemite Association, Yosemite National Park.

Beedy, E. C.

- 2008. Harlequin Duck (*Histrionicus histrionicus*), in W. D. Shuford and T. Gardali, editors. *California bird species of special concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California*. Western Field Ornithologists and California Department of Fish and Game, Camarillo & Sacramento, California.

Bibby, Brian

- 1994 *An Ethnographic Evaluation of Yosemite Valley: The Native American Cultural Landscape*. Submitted to National Park Service, Yosemite National Park, California.
- 2002 *Ethnogeography of Yosemite National Park and Cultural Traditions Associated with Death*. Report on file, Yosemite Archeology Office, Yosemite National Park, California.

Bingaman, John W.

- 1968 *The Ahwahneechees. A Story of the Yosemite Indians*. End-Kian Publishing Company, Lodi, California.

Broadbent, Sylvia

- 1964 The Southern Sierra Miwok Language. *University of California Publications in Linguistics* 38. Berkeley.

Brown

- 1988 "Harlequin Ducks in California." *California Waterfowl* (Oct-Nov): 40-43.

Bunnell, Lafayette Houghton

- 1990 *Discovery of the Yosemite*. High Sierra Classics Series reprint of the 4th Edition (1911). Yosemite Association, Yosemite National Park.

Burridge, B. (ed)

- 1995 *Sonoma County Breeding Bird Atlas*. Madrone Audubon Society, Santa Rosa, CA.

CARB (California Environmental Protection Agency, Air Resources Board)

- 2010 California Area Designation Maps. <<http://www.arb.ca.gov/desig/adm/adm.htm>> Accessed March 13, 2010.

CBOE (California State Board of Equalization)

- 2009a "Property Taxes. Table 7 – Assessed Value of County-Assessed Property Subject to General Property Taxes, Inclusive of the Homeowner's Exemption, By Class of Property and by County, 2009-10." *State Board of Equalization 2008-2009 Annual Report*. <http://www.boe.ca.gov/annual/pdf/2009/table7_09.pdf> Accessed December 2010.
- 2009b "Table 2. Taxable Sales, by County, 2008." *Taxable Sales in California (Sales & Use Tax) During 2008*. Forty-eighth annual report. http://www.boe.ca.gov/news/pdf/ts_a08.pdf>. Accessed December 2010.
- 2009c "Table 4. Taxable Sales in the 22 Smallest Counties, by Type of Business, 2008." *Taxable Sales in California (Sales & Use Tax) During 2008*. Forty-eighth annual report. <http://www.boe.ca.gov/news/pdf/ts_a08.pdf>. Accessed December 2010.

CDFG (California Department of Fish and Game)

- 1988 *A Guide to Wildlife Habitats of California*. Edited by Kenneth E. Mayer and William F. Laudenslayer, Jr. State of California, Resources Agency, Department of Fish and Game Sacramento, California.
- 2009 "Special Animals List (833 taxa)." State of California, The Natural Resources Agency, Department of Fish and Game, Biogeographic Data Branch, California Natural Diversity Database. <http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp> Accessed July 31.

CDOF (California Department of Finance)

- 2007a *Historical Population Estimates for City, County and the State, 1991-2000, with 1990 and 2000 Census Counts*. Accessed online < <http://www.dof.ca.gov/HTML/DEMOGRAP/ReportsPapers/Estimates/E4/E4-91-00/E-4text2.php>>.

- 2007b *E-4 Population Estimates for Cities, Counties and the State, 2001-2007, with 2000 Benchmark*. Accessed online <http://www.dof.ca.gov/HTML/DEMOGRAP/ReportsPapers/Estimates/E4/E4-01-06/HistE-4.php>.
- 2007c *Cities/Counties Ranked by Size, Numeric and Percent Change*. Accessed online <http://www.dof.ca.gov/HTML/DEMOGRAP/ReportsPapers/Estimates/Rankings/CityCounties1-06/RankerText.php>.
- 2007d *Population Projections for California and Its Counties 2000-2050*. Accessed online <<http://www.dof.ca.gov/html/DEMOGRAP/ReportsPapers/Projections/P1/P1.php>>.
- 2010a Industry Employment and Labor Force – by Annual Average, March 2009 Benchmark. Labor Market Information Division. <www.labormarketinfo.edd.ca.gov>. Accessed December 2010.
- 2010b Historical Civilian Labor Force, Monthly/Annual Average Data. March 2009 Benchmark. Labor Market Information Division, Current Employment Statistics Program. <www.labormarketinfo.edd.ca.gov>. Accessed December 2010.
- CEDD (California Employment Development Department)
- 2007 County-to-County Commute Patterns (US Census Bureau) in Madera County. Labor Market Information Division, Current Employment Statistics Program Accessed online October 1-November 10, 2007 <www.labormarketinfo.edd.ca.gov>.
- 2010a Industry Employment and Labor Force – by Annual Average, March 2009 Benchmark. Labor Market Information Division. <www.labormarketinfo.edd.ca.gov>. Accessed December 2010.
- 2010b Historical Civilian Labor Force, Monthly/Annual Average Data. March 2009 Benchmark. Labor Market Information Division, Current Employment Statistics Program. <www.labormarketinfo.edd.ca.gov>. Accessed December 2010.
- CEQ (Council on Environmental Quality)
- 1981 Forty Most Asked Questions Concerning CEQ's NEPA Regulation. 46 Federal Register 18026, 18032.
- 1997 Considering Cumulative Effects under the National Environmental Policy Act.
- Cowardin, Lewis M., Virginia Carter, Francis C. Golet, and Edward T. LaRoe
- 1979 *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Department of the Interior, U.S. Fish and Wildlife Service, Office of Biological Services, Washington, D.C. 103 pp.
- Dean Runyan Associates
- 2010 "California Travel Impacts by County, 1992-2008. 2009 Preliminary State & Regional Estimates." California Tourism (April 2010). <http://www.deanrunyan.com/doc_library/CAImp.pdf>. Accessed December 2010.

Degenkolb Engineers

- 2010 *The Ahwahnee Hotel Seismic Evaluation and Rehabilitation Alternatives*. Prepared for Delaware North Companies Parks and Resorts at Yosemite, Inc.

Deur, Douglas

- 2006 *Yosemite National Park Traditional Use Study: Traditional Plant Use, Yosemite Valley and El Portal*. Submitted to Yosemite National Park, Yosemite.

Duriscoe, D.

- 2005 "Preliminary Report of Night Sky Monitoring visit to Yosemite National Park." NPS Night Sky Team. September.

Environmental Laboratory.

- 1987 Corps of Engineers wetland delineation manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

EPA (U.S. Environmental Protection Agency)

- 2010 The Green Book NonAttainment Areas for Criteria Pollutants.
<<http://www.epa.gov/air/oaqps/greenbk/>> Accessed February 6, 2010.

Gaines, D.

- 1992 *Birds of Yosemite and the East Slope*, 2nd ed., Artemisia Press, Lee Vining, CA.

Greene, Linda

- 1987 *Yosemite: The Park and Its Resources. A History of the Discovery, Management, and Physical Development of Yosemite National Park, California*. September.

Gutenberg, B., Buwalda, J. P., and Sharp, R. P.

- 1956 "Seismic Explorations on the Floor of Yosemite Valley, California", GSA Bulletin; August 1956; v. 67; no. 8; p. 1051-1078.

Grinnell, H. W.

- 1918 "A synopsis of the bats of California," University California Publications in Zoology, 17(12):223-404.

Grinnell, J., and A. H. Miller

- 1944 "The distribution of the birds of California," Pacific Coast Avifauna 27.

Hart, E. W.

- 1990 "Fault-Rupture Hazard Zones in California," California Division of Mines and Geology, Special Publication 42, Revised 1990.

Hornberger+Worstell

- 2009 *The Ahwahnee Comprehensive Rehabilitation Plan 50% Conceptual Design Alternatives*. Prepared for the National Park Service, Yosemite National Park and Delaware North Companies Parks and Resorts at Yosemite, Inc..

- 2010a *The Ahwahnee Comprehensive Rehabilitation Plan 100% Conceptual Design Alternatives*. Prepared for the National Park Service, Yosemite National Park and Delaware North Companies Parks and Resorts at Yosemite, Inc., March 2010.

- 2010b *The Ahwahnee Comprehensive Rehabilitation Plan 50% Schematic Design Alternatives*. Prepared for the National Park Service, Yosemite National Park and Delaware North Companies Parks and Resorts at Yosemite, Inc., August 2010.
- 2010c *Operational Program for The Ahwahnee Comprehensive Rehabilitation Plan*. Prepared for the National Park Service, Yosemite National Park and Delaware North Companies Parks and Resorts at Yosemite, Inc., March 2010.
- 2011 *The Ahwahnee Historic Rehabilitation Program*. Prepared for the National Park Service, Yosemite National Park and Delaware North Companies Parks and Resorts at Yosemite, Inc., January 2011.

Headwater Economics

- 2009 A Socioeconomic Profile, Mariposa County, California, Produced by the Economic Profile System, 2009 Version, February.

Hudson, John W.

- 1899-1902 Unpublished field notes on file, Field Museum of Natural History, Chicago.

Hull, K. L., R. W. Bevill, and M. S. Kelly,

- 1995 *Report of Selected Subsurface Archeological Investigations in Yosemite Valley 1986-1991, Yosemite National Park, California*. Yosemite Research Center Publications in Anthropology 14. Submitted to U.S.D.I., National Park Service, Yosemite National Park, California.

Hull, Kathleen L. and Michael J. Moratto

- 1999 *Archeological Synthesis and Research Design, Yosemite National Park, California*. Publications in Anthropology No. 21, Yosemite Research Center Yosemite National Park, California. Prepared by: Dames & Moore and INFOTEC. Prepared for: National Park Service, U.S. Department of the Interior.

Keane, J. J.

- 1999 Ecology of the Northern Goshawk in the Sierra Nevada, California. Ph.D. dissertation, University of California at Davis.

Keane, J.J., H. B. Ernest, and J. M. Hull

- 2011 "Conservation and Management of the Great Gray Owl 2007-2009: Assessment of Multiple Stressors and Ecological Limiting Factors," Draft Report prepared for Yosemite National Park.

Kirk Associates, LLC

- 2002 "Ahwahnee: Correct Fire Life Safety Deficiencies Value Analysis Draft Report." Prepared for the Yosemite Concession Services Corporation, August.

Kleinfelder, Inc.

- 2009 "Geotechnical Investigation Report: Yosemite Valley Integrated Utility Project Phase 3B, Mariposa County, California." Prepared for KennedyJenks Consultants, Inc. June.

Interagency Wild and Scenic Rivers Coordinating Council (IWSRCC)

n.d. *Wild and Scenic Rivers Act Reference Guide*. <<http://www.nps.gov/rivers/>>.

2004 *Wild and Scenic Rivers Act: Section 7*. Technical Report. Portland, OR: U.S. Forest Service.

Mancillas, Stella C.

2000 *When The Rocks Came Down: A History of the Indians of Yosemite Valley, 1916-1953*. Unpublished Master of Arts, Department of History, Sacramento State University, Sacramento.

Mariposa County

2010 County of Mariposa, Final Budget, Fiscal Year 2010-2011.
<<http://www.mariposacounty.org/>>. Accessed December 2010.

Marshall, J.T.

1988 "Birds lost from a giant sequoia forest during fifty years," *Condor* 90:359–372.

Maurer, J. R.

1999 Great Gray Owl impact assessment for the Tuolumne Grove parking lot development proposal. Report to Office of Design and Engineering, Division of Maintenance, Yosemite National Park.

Maurer, J.R.

2006 Final Report: Great Gray Owl Survey in Yosemite National Park. Submitted to Yosemite National Park under USDI NPS YNP Contract No. P8826-05-0058, including modification.

Merriam, C. Hart

1917 Indian Village and Camp Sites in Yosemite Valley. *Sierra Club Bulletin* 10:202-209.

Millar, C. I., R. D. Westfall, D. L. Delaney, J. C. King, and L. J. Graumlich.

2004 *Response of subalpine conifers in the Sierra Nevada, California, U.S.A., to 20th century warming and decadal climate variability*. *Arctic, Antarctic, and Alpine Research* 36:181-200.

Moore Twining Associates, Inc.

2009 "Geotechnical Engineering Investigation Report: Proposed New Foundations for Existing Dormitory, 1 Ahwahnee Road, Yosemite National Park, California." Prepared for Mountain Home Drafting & Design, September.

Moritz, C.

2007 *A Re-Survey of the Historic Grinnell-Storer Vertebrate Transect in Yosemite National Park, California*. Museum of Vertebrate Zoology, U.C. Berkeley, CA.

Napton, L. Kyle, and Elizabeth A. Greathouse

- 1974 "Archeological Survey in Yosemite National Park, California: Archeological Survey of the Yosemite Valley Floor." Prepared by: Institute for Archeological Research, California State College, California. Prepared for: National Park Service, Western Archeological and Conservation Center, Tucson, Arizona.

Nilsson, Elena, Russell Bevill, and Melinda Button

- 2009 *Archeological Investigation of the Priority 3 Sites, Yosemite National Park, California*. Yosemite Research Center Publications in Anthropology 33. Submitted to USDI National Park Service, Yosemite National Park, California.

NPS (National Park Service, U.S. Department of the Interior)

- 1916 Organic Act.
- 1980 *General Management Plan*. Yosemite National Park, California
- 1986a "Archeological Site Record for CA-MRP-291/751," by M. Baldrice. On file, Yosemite Archeology Office, Yosemite National Park, CA.
- 1986b "Archeological Site Record for CA-MRP-292/293/H," by M. Baldrice. On file, Yosemite Archeology Office, Yosemite National Park, CA.
- 1987 "The Ahwahnee Hotel," by Laura Soulliere Harrison. National Register of Historic Places Inventory Nomination Form. Denver Service Center, Denver, CO.
- 1988 *Preservation Brief 17: Architectural Character – Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character*. By Lee H. Nelson. Technical Preservation Services, National Park Service, US Department of the Interior.
- 1992a "Archeological Site Record for CA-MRP-291/751," by P. Depascale. On file, Yosemite Archeology Office, Yosemite National Park, CA.
- 1992b "Archeological Site Record for CA-MRP-292/293/H," by P. Depascale. On file, Yosemite Archeology Office, Yosemite National Park, CA.
- 1994 Yosemite Valley Archeological Monitoring: Project Summary for Utility Line Rehabilitation, 1985-1992. By Paul Depascale. On file, Yosemite Archeology Office, Yosemite National Park, CA.
- 1997a "Analysis of the Hydrologic, Hydraulic, and Geomorphic Attributes of the Yosemite Valley Flood: January 1-3, 1997." by William Jackson, Gary Smillie, and Michael Martin. Technical Report NPS/NRWRD/NRTR-97/129. Fort Collins, Colorado. National Park Service, Water Resources Division.
- 1997b *Vegetation Management Plan*, Yosemite National Park, California.
- 1998 NPS-28: Cultural Resource Management Guidelines.
<http://www.nps.gov/history/history/online_books/nps28/28contents.htm>
Accessed June 25, 2009.

- 1999 *1999 Park Programmatic Agreement Among the National Park Service at Yosemite, the California State Historic Preservation Officer and the Advisory Council On Historic Preservation Regarding Planning, Design, Construction, Operations and Maintenance, Yosemite National Park, California.*
- 2000 Final Yosemite Valley Plan/Supplemental Environmental Impact Statement. Yosemite National Park. November.
- 2001 *Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making.* United States Department of the Interior, National Park Service.
- 2002 *Director's Order 77-1: Wetland Protection.* United States Department of the Interior, National Park Service.
- 2003 *Curry Village and East Yosemite Valley Campground Improvements Project Environmental Assessment.* Yosemite National Park, California.
- 2004a *Final Yosemite Fire Management Plan and Environmental Impact Statement.* Yosemite National Park, California.
- 2004b *Natural Resources Management Reference Manual 77, Air Resources Management.* United States Department of the Interior, National Park Service.
- 2005 "Yosemite Valley." By Ethan Carr, Paul Cloyd, Randy Fong, Cathy Gilbert, Robbyn Jackson, Laura Kirn, Erica Owens, Robert Page. National Register of Historic Places Inventory Nomination Form. Denver Service Center, Denver, CO.
- 2006a *Management Policies 2006.* United States Department of the Interior, National Park Service. August.
- 2006b Yosemite Valley National Register of Historic Places Nomination Form. By Ethan Carr, Paul Cloyd, Randy Fong, Cathy Gilbert, Robbyn Jackson, Laura Kirn, Erica Owens, and Robert Page. Yosemite Archeology Office, Yosemite National Park, CA.
- 2007a "Archeological Site Record for CA-MRP-291/751," by Middleton, J. and J. Retzer. On file, Yosemite Archeology Office, Yosemite National Park, CA.
- 2007b "Archeological Site Record for CA-MRP-292/293/H," by Middleton, J. and J. Retzer. On file, Yosemite Archeology Office, Yosemite National Park, CA.
- 2008a "Archeological Site Record for CA-MRP-292/293/H," by E. Nilsson. On file, Yosemite Archeology Office, Yosemite National Park, CA.
- 2008b *Invasive Plan Management Plan,* Yosemite National Park, California.
- 2009 *Design Guidelines for Yosemite National Park.* (forthcoming) Yosemite National Park, California.
- 2010a *Director's Order 58: Structural Fire Management.* United States Department of the Interior, National Park Service.

- 2010b “Rock Fall” <<http://www.nps.gov/yose/naturescience/rockfall.htm>> Accessed March 1, 2010.
- 2010c “Special Status Animal Species.” <<http://www.nps.gov/yose/naturescience/ss-animal-species.htm>> Accessed January 18, 2010.
- 2010d “Special Status Bird Species.” <<http://www.nps.gov/yose/naturescience/ss-bird-species.htm>> Accessed January 18, 2010.
- 2010e Soundscape Inventory and Monitoring.
<<http://www.nature.nps.gov/naturalsounds/impacts/>>. Accessed March 2010.
- 2011a Special Status Wildlife Species Report for the Merced River Corridor in Yosemite National Park, by Travis Espinoza, Lindsay Cline, Sarah Stock, Heather McKenny, and Andrew Steele. Resources Management and Science Division, Yosemite National Park, May.
- 2011b Yosemite Wildlife Observation Database. 2011. Yosemite National Park. Retrieved April 2011.
- NPS (National Park Service) and SHPO (California State Historic Preservation Officer)
- 2011 *Programmatic Agreement Between the National Park Service, Yosemite National Park and the California State Historic Preservation Officer Regarding The Ahwahnee Hotel National Historic Landmark Comprehensive Rehabilitation Program, Mariposa County, California.*
- NRCS (Natural Resources Conservation Service)
- 2006 Soil Survey Geographic (SSURGO) database for Yosemite National Park, California. U.S. Department of Agriculture, Natural Resources Conservation Service. Fort Worth, TX. URL: <http://SoilDataMart.nrcs.usda.gov/>
- Ortiz, Beverly
- 1996 *It Will Live Forever: Traditional Yosemite Indian Acorn Preparation.* Heyday Books, Berkeley, California.
- Page & Turnbull, Inc.
- 1997 Historic Structures Report: The Ahwahnee, Yosemite National Park, California. Prepared for the Yosemite Concession Services Corporation, November.
- Pavlik, Robert Charles
- 1986 *In Harmony with the Landscape: A History of the Built Environment of Yosemite National Park, 1915-1940.* Unpublished Master of Arts Thesis, Department of History, University of California, Santa Barbara, California.
- Pierson, Elizabeth and William Rainey
- 1993 Bat Surveys: Yosemite Valley and Hetch Hetchy Reservoir, July 1993. Prepared for the National Park Service, Yosemite National Park, Resources Management Division, July.

Powers, Stephen

- 1976 *Tribes of California*. Reprinted from the 1877 edition of Contributions to North American Ethnology, Volume III. University of California Press, Berkeley and Los Angeles.

Saab, V.

- 1999 "Importance of spatial scale to habitat use by breeding birds in riparian forests: a hierarchical analysis." *Ecological Applications* 9:135-151.

Sauer, J. R., J. E. Hines and J. Fallon

- 2008 The North American Breeding Bird Survey, results and analysis 1966-2007. Version 5.15.2008. USGS Patuxent Wildlife Research Center, Laurel, Maryland.

<<http://www.mbr-pwrc.usgs.gov/bbs/>> Accessed 28 June 2010.

SCS (U.S. Department of Agriculture, Soil Conservation Service)

- 1991 *Soil Survey of Yosemite National Park, Yosemite Valley, California* – Interim Report.

Shuford, W. D., and T. Gardali

- 2008 *California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California,* Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Siegel, R. B., R. L. Wilkerson, and D. F. DeSante

- 2008 Extirpation of the Willow Flycatcher from Yosemite National Park. *Western Birds* 39:8-21.

Siegel, R. B., P. Pyle, D. R. Kaschube, and D. F. DeSante

- 2006 The 2006 annual report of the monitoring avian productivity and survivorship (MAPS) program in Yosemite National Park. The Institute for Bird Populations annual report to the National Park Service.

Sonoran Institute

- 2007a "A Socioeconomic Profile, Mariposa County, California." Produced by the Economic Profile System, 2004 Version, October 31, 2007.
- 2007b "A Socioeconomic Profile, Mariposa CDP, California." Produced by the Economic Profile System Community, November 7, 2007.

SRRI (Sacramento Regional Research Institute)

- 2009 Stimulus Calculation Tool – Statewide Economic Impacts of Construction Spending in California, April 2009. <<http://www.strategiceconomicresearch.org/>> Accessed December 2010.

Steel, Z. L., P. F. Grof-Tisza, K. Y. Sulzner, and M. L. Wilkerson

- 2011 Assessing species vulnerability to climate change for the Oregon Conservation Strategy: Willamette Valley ecoregion.

Stynes, Daniel J.

- 2007 *Impacts of Visitor Spending on the Local Economy: Yosemite National Park, 2005*. Prepared for the National Park Service, Social Science Program. Michigan State University, Department of Community, Agriculture, Recreation and Resource Studies.

Thelander, C. G.

- 1973 "Bald eagle reproduction in California, 1972-1973." California Department of Fish and Game, Sacramento, Wildlife Management Branch.

Treadwell & Rollo

- 2009 "Geotechnical Investigation: Ahwahnee Hotel, Yosemite National Park, California." Prepared for Delaware North Companies Parks and Resorts at Yosemite, November.

Unitt, Philip

- 2004 *San Diego County Bird Atlas*. Proceedings of the San Diego Natural History Museum No. 39, Ibis Publishing, Temecula, California.

University of California, Davis (UC Davis)

- 1996 *Sierra Nevada Ecosystem Project, Final Report to Congress*. Vol. I: *Assessment Summaries and Management Strategies*; Vol. II: *Assessments and Scientific Basis for Management Options*; Vol. III: *Assessments, Commissioned Reports, and Background Information; Addendum*. Davis: University of California.

U.S. Bureau of Economic Analysis, U.S. Department of Commerce

- 2002 RIMS II Multipliers for the State of California. July.
- 2009 Table CA 1-3, Per Capita Personal Income, Regional Economic Accounts, Local Area Personal Income. BEA, Regional Economic Information System, April 2009.
- 2010 "CA1-3 - Per Capita Personal Income" Regional Economic Information System Bureau of Economic Analysis, April 2010. < <http://www.bea.gov/regional/reis/>>. Accessed December 2010.

U.S. Census Bureau, U.S. Department of Commerce

- 1990a "Table DP-1. General Population and Housing Characteristics: 1990." *1990 Census of Population and Housing*. Summary Tape File 1. Accessed online between October 1 and November 10, 2007 <<http://factfinder.census.gov>>.
- 1990b "Table DP-4. Income and Poverty Status in 1989: 1990." *1990 Census of Population and Housing*. Summary Tape File 3. Accessed online between October 1 and November 10, 2007 <<http://factfinder.census.gov>>.
- 1990c "Table DP-3. Labor Force Status and Employment Characteristics: 1990." *1990 Census of Population and Housing*. Summary Tape File 3. Accessed online between October 1 and November 10, 2007 <<http://factfinder.census.gov>>.

2000a "Table DP-1. Profile of General Demographic Characteristics: 2000." *Census 2000*. Summary File 1. Accessed online between October 1 and November 10, 2007 <<http://factfinder.census.gov>>.

2000b "Table DP-3. Profile of Selected Economic Characteristics: 2000." *Census 2000*. Summary File 3. Accessed online between October 1 and November 10, 2007 <<http://factfinder.census.gov>>.

2000c "Table DP-4. Profile of Selected Housing Characteristics: 2000." *Census 2000*. Summary File 3. Accessed online between October 1 and November 10, 2007 <<http://factfinder.census.gov>>.

2009 "TM-M2. Persons per Square Mile: 2009. California by County." Datasets with thematic maps. <factfinder.census.gov>. Accessed December 2010.

2010a "California – County, GCT-T1R. 2009 Population Estimates." Population Estimates Program. <factfinder.census.gov>. Accessed December 2010.

2010b Quickfacts from the U.S. Census Bureau. <quickfacts.census.gov>. Accessed December 2010.

U.S. Department of the Interior (USDI)

1995 The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings, by Kay D. Weeks and Anne Grimmer. Washington, DC: National Park Service, Cultural Resource Stewardship & Partnerships, Heritage Preservation Services

USFWS (U.S. Fish and Wildlife Service, U.S. Department of the Interior)

1996 *The National Wetlands Inventory*. Basemap provided by US Geological Service.

1998 *Endangered Species Act Consultation Handbook*. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.

VOLPE (VOLPE National Transportation Systems Center)

1997 *El Portal Road Improvements Environmental Assessment*. Interagency Agreement No. 1A 8800-97-0003, Technical Assistance Agreement No. TAA-97-001. Prepared for Yosemite National Park, National Park Service, U.S. Department of the Interior, Yosemite National Park, California.

WBS (Western Bat Specialists, Inc.)

2009 Bat Guano Inspection, communication with Delaware North Parks and Resorts at Yosemite, Inc.

Weatherspoon, C.P., S. J. Husari, and J. W. van Wagtendonk

- 1992 “Fire and fuels management in relation to owl habitat in forests of the Sierra Nevada and southern California,” in Verner, J., K. S. McKelvey, B. R. Noon, R. J. Gutierrez, G. I. Gould, and T. W. Beck (eds), *The California spotted owl: a technical assessment of its current status*, Pacific Southwest Research Station, USDA Forest Service, Albany, CA.

Widdowson

- 2008 “Olive-sided Flycatcher (*Contopus cooperi*),” in Shuford, W. D., and T. Gardali, ed. *California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California*,” Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Wieczorek, G. F. and Jaeger, S.

- 1996 “Triggering Mechanisms and Depositional Rates of Postglacial Slope-Movement Processes in the Yosemite Valley, California.” *Geomorphology*, 15:17-31.

Wildman, A.

- 1992 The effect of human activity on Great Gray Owl hunting behavior in Yosemite National Park, California. Master’s Thesis, University of California, Davis.

Yosemite Park and Curry Company

- 1979 “A Visit with Ed Hardy” in Yosemite Park & Curry Company Newsletter. YP&CCo. Collection, Yosemite Archives, Yosemite National Park.

THIS PAGE INTENTIONALLY LEFT BLANK

Appendix A: Programmatic Agreement Between
the National Park Service, Yosemite National
Park and the California State Historic
Preservation Officer Regarding The Ahwahnee
Hotel National Historic Landmark
Comprehensive Rehabilitation Program,
Mariposa County, California

THIS PAGE INTENTIONALLY LEFT BLANK

**PROGRAMMATIC AGREEMENT
BETWEEN THE NATIONAL PARK SERVICE, YOSEMITE NATIONAL PARK AND THE
CALIFORNIA STATE HISTORIC PRESERVATION OFFICER REGARDING THE
AHWAHNEE HOTEL NATIONAL HISTORIC LANDMARK COMPREHENSIVE
REHABILITATION PROGRAM, MARIPOSA COUNTY, CALIFORNIA**

WHEREAS, the U.S. Department of the Interior, National Park Service (NPS) at Yosemite National Park (the Park) proposes to administer a comprehensive rehabilitation program for The Ahwahnee hotel and associated guest cottages (collectively The Ahwahnee) in the Park through actions to provide code-compliant fire protection systems, egress, seismic safety, and accessibility; to preserve and protect the historic fabric and integrity of the historic property; to upgrade mechanical, electrical, and plumbing systems; to enhance sustainability by upgrading thermal efficiency of the buildings and improving energy and water-use efficiency; and to improve functionality and operational efficiency to ensure The Ahwahnee's continued use and enjoyment by the American public (the Undertaking); and

WHEREAS, The Ahwahnee is a National Historic Landmark (NHL) and a contributor to the Ahwahnee Developed Area within the Yosemite Valley Historic District; and

WHEREAS, NPS consulted with the California State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) pursuant to the 1999 *Programmatic Agreement Among the National Park Service at Yosemite, The California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Planning, Design, Construction, Operations, and Maintenance, Yosemite National Park, California* (1999 PA) and regulations at 36 CFR 800 for implementing Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470f); and

WHEREAS, NPS and SHPO are entering into this programmatic agreement (PA) because the Undertaking will have an adverse effect on the NHL and has the potential to affect archeological sites that contribute to the Yosemite Valley Archeological District; and

WHEREAS, NPS notified ACHP and the National Trust for Historic Preservation (NTHP) of the intent to develop the PA pursuant to 36 CFR 800.14(b), and invited the agencies to participate, via letters dated November 23, 2010, and both agencies declined to participate in consultations to develop this PA (ACHP in writing via letter dated December 15, 2010, and NTHP verbally via telephone on December 6, 2010); and

WHEREAS, a Historic Structures Report, a Cultural Landscape Report, and a Historic Furnishings Report for The Ahwahnee (REPORTS) are being completed to inform the planned actions that comprise the Undertaking; and

WHEREAS, actions that comprise the Undertaking will be described and analyzed in the Comprehensive Rehabilitation Plan Environmental Assessment and 100% schematic design document, which will be completed in 2011; and

WHEREAS, NPS has notified the public and interested parties of the proposed Undertaking through public scoping meetings; targeted outreach letters to California museums, historical societies, and preservation groups; regular open house presentations in Yosemite Valley; gateway community meetings; and electronic media such as web sites and daily reports; and provided them an opportunity to comment through the National Environmental Policy Act review process; and

WHEREAS, NPS has notified the public of the development of this PA through the NPS Planning, Environment, and Public Comment website and targeted outreach to museums, historical societies, and preservation groups; and has provided the opportunity to review and comment on the PA; and

WHEREAS, NPS has determined and SHPO has concurred that the Area of Potential Effect (APE) for the Undertaking incorporates areas within the site boundaries as described in the 1977 National Register of Historic Places (NRHP) nomination for The Ahwahnee Hotel, which includes The Ahwahnee hotel, eight multi-unit cottages, parking areas, employee dormitory, meadow, and hotel grounds; the area west of the 1977 NRHP nomination western boundary containing the Ahwahnee Road, the pedestrian/bicycle path, the bridle path, and the stone hotel

entry gatehouse features; and the area east of the 1977 NRHP nomination eastern boundary containing an unpaved road and a service/storage area, as identified in Attachment A to this PA; and

WHEREAS, the APE coincides in part with the general location of the mid-nineteenth century American Indian village of Wis'-kah-lah and Yosemite Valley traditional cultural use areas, NPS has consulted with the Tuolumne Band of Mewuk Indians, the Bridgeport Paiute Indian Colony, the Bishop Paiute Tribe, the North Fork Rancheria of Mono Indians and the Picayune Chukchansi Indians, the American Indian Council of Mariposa County, Inc. (aka Southern Sierra Miwuk Nation), and the Mono Lake Kutzadikaa Paiute Indian Community, and invited each to participate as a concurring party to this PA via letters dated January 5, 2011; and

WHEREAS, work conducted under the Undertaking will occur over a number of years, through a phased implementation approach, pending funding approvals; and

WHEREAS, the Park has on staff or has access to qualified cultural resource specialists who meet, as a minimum, the appropriate qualifications set forth in the Secretary of the Interior's Professional Qualifications Standards to carry out programs for historic preservation including history, historic architecture, historic landscape architecture, archeology, and ethnography;

NOW, THEREFORE, NPS at Yosemite National Park and SHPO (the Signatories) agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the effects of the Undertaking on historic properties, and further agree that these stipulations shall govern the Undertaking and all of its parts until this PA expires or is terminated.

STIPULATIONS

I. Definitions

The definitions provided at 36 CFR 800.16 are applicable throughout this PA.

II. Professional Qualifications and Standards

- A.** All historic preservation activities implemented pursuant to this PA shall be carried out by or under the direct supervision of a person or persons meeting at a minimum the Secretary of Interior's Professional Qualifications Standards (48 FR 44738-39) for the discipline appropriate to the historic property in question.
- B.** Any inventory or documentation of historic properties pursuant to implementation of the PA shall conform to the provisions of the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716-44740) and applicable standards and guidelines for historic preservation established by SHPO.
- C.** Curation of materials and records resulting from actions stipulated by this PA shall be in accordance with 36 CFR 79. Such materials and records shall be curated by NPS to the extent permitted by sections 5097.98 and 5097.991 of the California Public Resources Code.
- D.** The Signatories to this PA acknowledge that historic properties covered by this PA are subject to the provisions of section 304 of the NHPA and section 6254.10 of the California Government Code (Public Records Act), relating to the disclosure of archeological site information and, having so acknowledged, shall ensure that all actions and documentation prescribed by this PA are consistent with said sections.

III. Consultation

- A.** NPS initiated consultation with SHPO on September 2, 2009, via written correspondence, and has continued consultation through visits by NPS to SHPO offices in Sacramento on September 15, 2009, and March 11, 2010; a visit by SHPO staff to the Park on October 21, 2010; and correspondences at various study and design stages of the planning process for the Comprehensive Rehabilitation Program.
- B.** NPS shall continue to consult with SHPO regarding design and construction planning as described below:

1. Submission of Project Documents – Comprehensive Rehabilitation Program. NPS has submitted or shall submit schematic design (50% and 100%), design development (50% and 90%), and construction working documents for each phase of work to SHPO for review and comment.
2. SHPO shall have 30 calendar days from the date of receipt to provide comments to NPS. If SHPO fails to respond within this time, NPS shall assume SHPO has no comments and will proceed to the next step in the design process.
3. Through consultation and by mutual agreement, NPS and SHPO may adopt a more expedited review process for portions of the Undertaking, as circumstances indicate. If departure from the review process outlined in Stipulations III.B.1 and III.B.2 of this PA is adopted, NPS shall document the expedited process and the consultations through which the mutual decision to expedite was made, via the reporting specified in Stipulation XIII of this PA.

IV. Actions to Resolve Adverse Effects

A. Documentation

1. NPS shall complete HABS photographic documentation of The Ahwahnee hotel and cottages. HABS documentation for areas of the hotel and cottages to be directly affected by the Undertaking will be completed prior to implementing actions in those respective areas. The Park shall consult with the HABS/HAER/HALS coordinator for the NPS Pacific West Region to determine the type and level of documentation.

B. NHL Nomination Form Update

1. NPS shall update the NHL nomination form for The Ahwahnee to reflect the findings of historical research conducted in preparation of the REPORTS. The revised content for the nomination form will be prepared in consultation with qualified cultural resource staff and in collaboration with the NPS Pacific West Regional Office cultural resources staff, and submitted to the SHPO for 30-day review and comment before being submitted to the NPS Regional NHL Program.

C. Interpretation

1. NPS shall incorporate selected historic information compiled in the REPORTS or through other research conducted in conjunction with, and collected during implementation of, the Undertaking into interpretive media and materials on The Ahwahnee, to be prepared in consultation with qualified cultural resource staff. NPS will make interpretive media and materials available in more than one format (e.g., written pamphlet, web media) for distribution to the public.
2. NPS shall prepare a report to document the rehabilitation Undertaking. As each rehabilitation phase is completed, that phase will be described through narrative and photographic documentation of conditions before, during, and after construction activities. NPS shall submit the draft phase reports to SHPO for 30-day review and comment. NPS shall submit the final phase reports to the Park archives and provide these reports through web media accessible to the public for each major phase of the Undertaking.

V. Archeological and Traditional Cultural Resources

- A.** NPS shall conduct archeological monitoring of all ground-disturbing activities for this Undertaking in accordance with Stipulation VII. All archeological investigations conducted in support of the Undertaking, including testing and data recovery, shall be carried out in accordance with a treatment plan consistent with the *Archeological Synthesis and Research Design* and in consultation with the SHPO and American Indian tribes and groups participating in this PA. NPS National Register determinations of eligibility (DOEs) shall be submitted to SHPO in accordance with Stipulation VI of this PA.
- B.** NPS shall afford American Indian representatives from the culturally associated tribes and groups an opportunity to participate in the protection of resources to which they attach cultural, spiritual, and/or religious significance that may be affected by the Undertaking, including archeological investigations.

VI. Post-Review Discoveries and Unanticipated Effects

- A.** If it appears that an action of the Undertaking will affect a previously unidentified property that may be eligible for inclusion in the National Register or affect a known historic property in an unanticipated manner, NPS will halt construction activities in the vicinity of the discovery, and take all reasonable measures to avoid or minimize harm to the property. Within two (2) working days of the discovery, NPS shall notify SHPO via telephone of the discovery, and shall provide via electronic mail to SHPO an assessment of National Register eligibility of the property and description of actions proposed to resolve any potential adverse effects.
- B.** SHPO shall respond to NPS within two (2) working days of the notification via electronic mail. NPS shall take into account SHPO's recommendations regarding National Register eligibility and proposed actions, and then shall carry out appropriate actions. NPS shall provide SHPO a report of the actions when they are completed.

VII. Monitoring of Construction Activities

NPS subject matter experts will be available on site during construction activities. SHPO and Tribes may monitor activities pursuant to this agreement. NPS shall cooperate with SHPO and Tribes in carrying out any monitoring and review responsibilities. Tribes will be invited to participate in monitoring of any ground disturbing activities associated with the Undertaking.

VIII. Relationship to Other Existing Agreements and Acts

This PA shall not be construed to supersede or contravene the provisions of the following: Archaeological Resources Protection Act (1979), as amended; Native American Graves Protection and Repatriation Act (1990); American Indian Religious Freedom Act (1978). This PA shall supersede the provisions of the 1999 *Programmatic Agreement Among the National Park Service at Yosemite, The California State Historic Preservation Officer and the Advisory Council on Historic Preservation Regarding Planning, Design, Construction, Operations and Maintenance, Yosemite National Park, California* (1999 PA) only for actions of the Undertaking of The Ahwahnee Comprehensive Rehabilitation Plan.

IX. Dispute Resolution

- A.** The signatories agree that this PA shall guide the implementation of the Undertaking for addressing its effects to and treatment of historic properties until this PA expires or is terminated. Should any of the signatories of this PA at any time object in writing to the manner in which the terms of this PA are implemented, to any action carried out or proposed with respect to implementation of this PA, or to any document prepared in accordance with and subject to the terms of this PA, the objecting party shall notify the other signatories of this PA. The signatories shall consult for 30 days from receipt of the notice of objection to promptly resolve the objection.
- B.** If the objection is resolved through consultation, NPS shall notify in writing the other signatories of the terms of the resolution, and NPS may proceed in accordance with the terms of such resolution.
- C.** If after initiating consultation, NPS determines that the objection cannot be resolved through consultation, or if the duration of the consultation has exceeded 30 days from the commencement of consultation to resolve the dispute, NPS shall forward all documentation relevant to the objection to the ACHP, including NPS's proposed resolution of the objection, with the expectation that the ACHP will respond within 30 days after receipt of such documentation by either:
 - 1. Advising NPS that the ACHP concurs in NPS's proposed resolution of the objection, whereupon NPS shall notify the other signatories, and NPS shall resolve the objection accordingly; or
 - 2. Providing NPS with recommendations, which NPS shall take into account in reaching a final decision to resolve the objection. NPS shall notify all the signatories and the ACHP of its final decision.

If the ACHP or any of the signatories object to the final decision, the objecting party shall notify the other signatories and the ACHP, and the ACHP shall follow the procedures at 36 CFR 800.7(c).

- D.** The procedures outlined in Stipulations IX.A to IX.C, above, shall apply only to the subject of the objection. NPS's responsibility to carry out all actions under this PA that are not the subjects of the objection, and which do not foreclose the consideration of alternatives to resolve the objection, shall remain unchanged.
- E.** At any time during implementation of the terms of this PA, should a member of the public object to the manner of such implementation, NPS shall immediately notify SHPO in writing. NPS shall consult with the objecting party and, if the objecting party so requests, with the other parties to this PA, for no more than 30 days. Within 30 days following closure of this consultation period, NPS will render a decision regarding the objection and notify the other parties of its decision in writing. In reaching its decision, NPS will take all comments from the other parties into consideration. NPS's decision regarding resolution of the objection will be final.

X. Amendments

Either signatory party may propose that this PA be amended, whereupon NPS and SHPO shall consult to consider such amendment pursuant to 36 CFR 800.6(c)(7 and 8). This PA may be amended only upon the written agreement of both signatories to the Agreement. The amended PA shall take effect on the date that it is executed by NPS and SHPO. NPS shall then submit a copy of the amended PA to ACHP and the concurring parties to this PA.

XI. Termination

- A.** If a signatory party to this PA proposes termination of this PA, the party proposing termination shall, in writing, notify the other, explain the reasons for proposing termination, and consult for 30 days to seek alternatives to termination.
- B.** Should such consultation result in an agreement on an alternative to termination, then the signatories shall proceed to amend this PA in accordance with Stipulation X.
- C.** Should such consultation fail to find an alternative to termination, the party proposing termination may terminate this PA by promptly notifying the other parties in writing. Termination hereunder shall render this PA without further force or effect.
- D.** Should this PA be terminated, NPS shall consult with SHPO to develop a new PA in accordance with 36 CFR 800.14(b). Until and unless a new PA is executed for the undertaking, NPS will consult with the SHPO in accordance with 36 CFR 800.4 through 6.

XII. Duration of the PA

- A.** Unless terminated pursuant to Stipulation XI, the duration of this PA is twenty (20) years from the date of its execution or until this project is complete, whichever is shorter. Five (5) years after the date of executing this Agreement, and every five (5) years thereafter for the duration of the term of the PA, NPS shall contact SHPO in writing to organize a review of the sufficiency of the PA and consider potential amendments of its terms, as appropriate.
- B.** If stipulations are not carried out by the expiration of the PA, NPS shall consult with SHPO to determine if the PA should be allowed to expire or should be extended through amendment. Unless NPS and SHPO agree on an extension, the PA shall automatically terminate 20 years from the date of execution and have no further force or effect.

XIII. Reporting

NPS will describe how the agency is carrying out its responsibilities under this PA by including a summary of Undertaking actions taken, including those described in Stipulations V, VI, and VII, within an annual report. NPS shall submit the draft annual reports to SHPO for 30-day review and comment. NPS shall provide the final annual reports to SHPO, concurring parties to this PA, and ACHP, and shall make these reports available to the public through the Yosemite Research Library and on the Yosemite National Park website.

XIV. Effective Date of the PA

This PA shall take effect on the latest date that it is signed and executed by NPS and SHPO.


XV. Anti-Deficiency Act

Any requirement for the payment or obligation of funds by the Government established by the terms of this PA shall be subject to availability of appropriated funds. No provision in this PA shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 USC Section 1341. If the availability of funds and compliance with the Anti-Deficiency Act impair NPS' ability to perform under this PA, then NPS shall consult in accordance with Stipulation X of this PA.

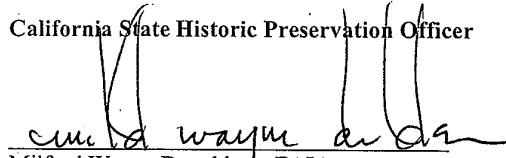
EXECUTION of this PA, its subsequent filing with the ACHP, and implementation of its terms evidence that NPS has taken into account the effects of this Undertaking on historic properties and has afforded the ACHP, SHPO, and Tribes an opportunity to comment on the Undertaking and its effect on historic properties.

SIGNATORIES

National Park Service

 Date: 1/20/11
Don L. Neubacher
Superintendent, Yosemite National Park

California State Historic Preservation Officer

 Date: 24 JAN 2011
Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

CONCURRING PARTIES

**American Indian Council of Mariposa County
aka Southern Sierra Miwuk Nation**

Name Title

Date: _____

Bishop Paiute Tribe

Name Title

Date: _____

Bridgeport Paiute Indian Colony

Name Title

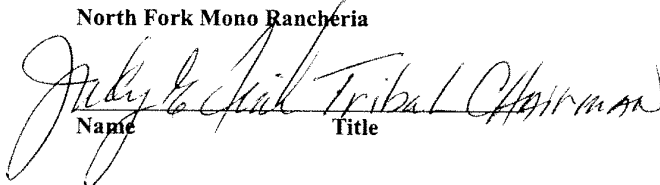
Date: _____

Mono Lake Kutzadika^a Tribe

Name Title

Date: _____

North Fork Mono Rancheria


Name Title

Date: 2/24/11

Picayune Rancheria of the Chukchansi Indians

Name Title

Date: _____

Tuolumne Band of Me-Wuk Indians

Name Title

Date: _____

Attachment A – Defined Area of Potential Effect for this Programmatic Agreement



THIS PAGE INTENTIONALLY LEFT BLANK

Appendix B: Selected Schematic Design Drawings of Major Actions

THIS PAGE INTENTIONALLY LEFT BLANK

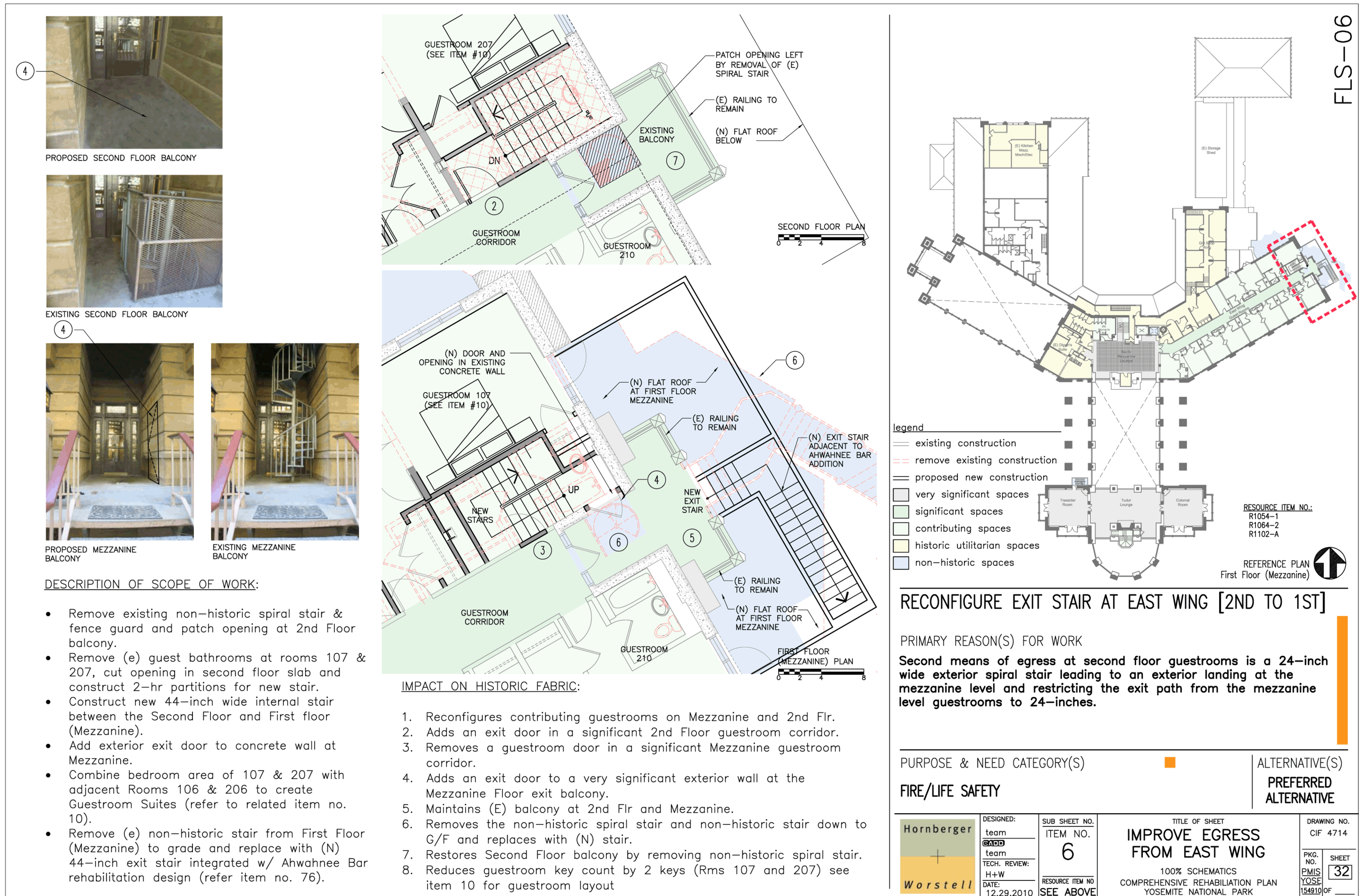


Figure B-1 East Wing egress, Alternatives 1 and 3

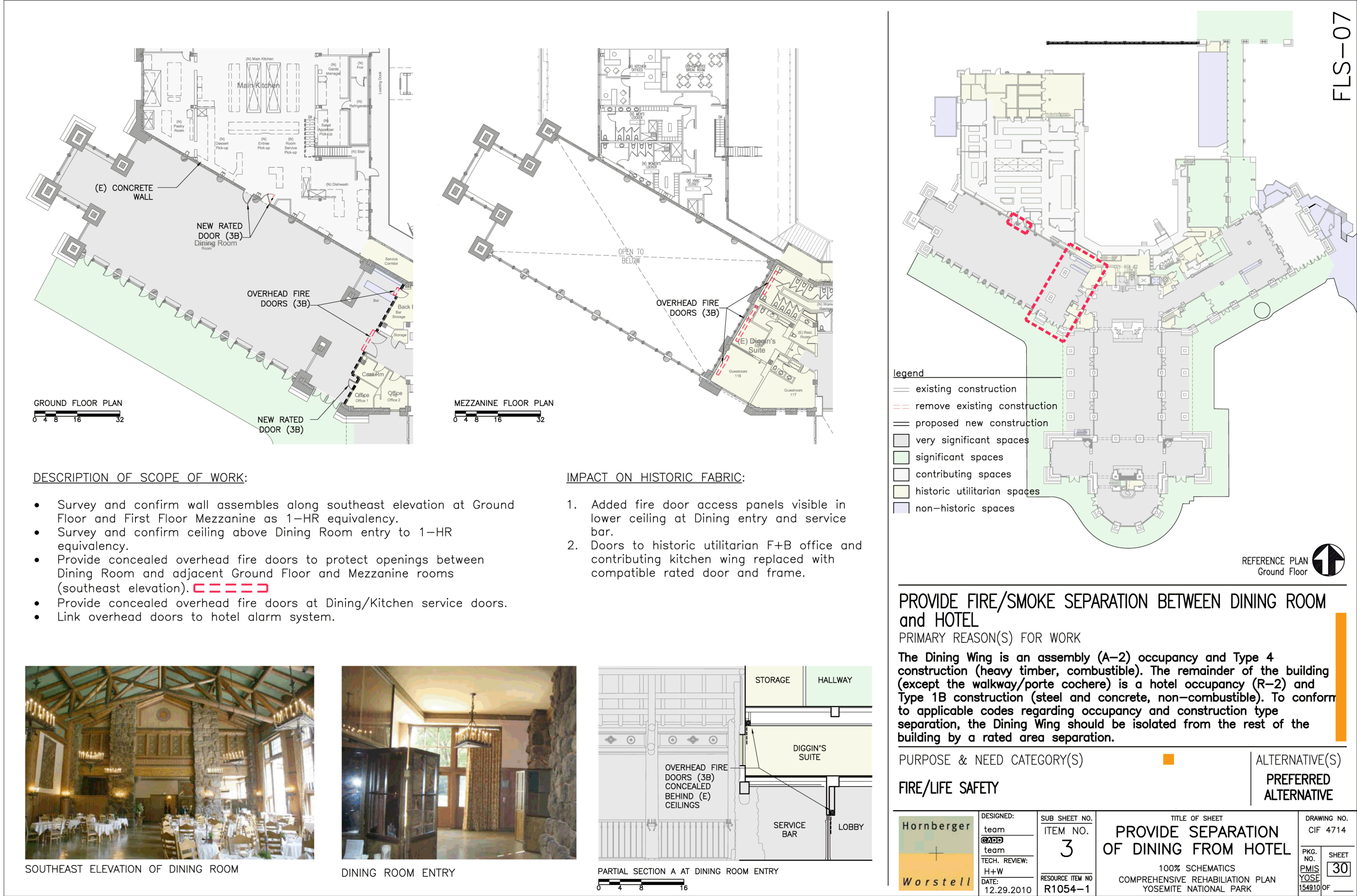


Figure B-2 Fire separation at dining room, all Action Alternatives

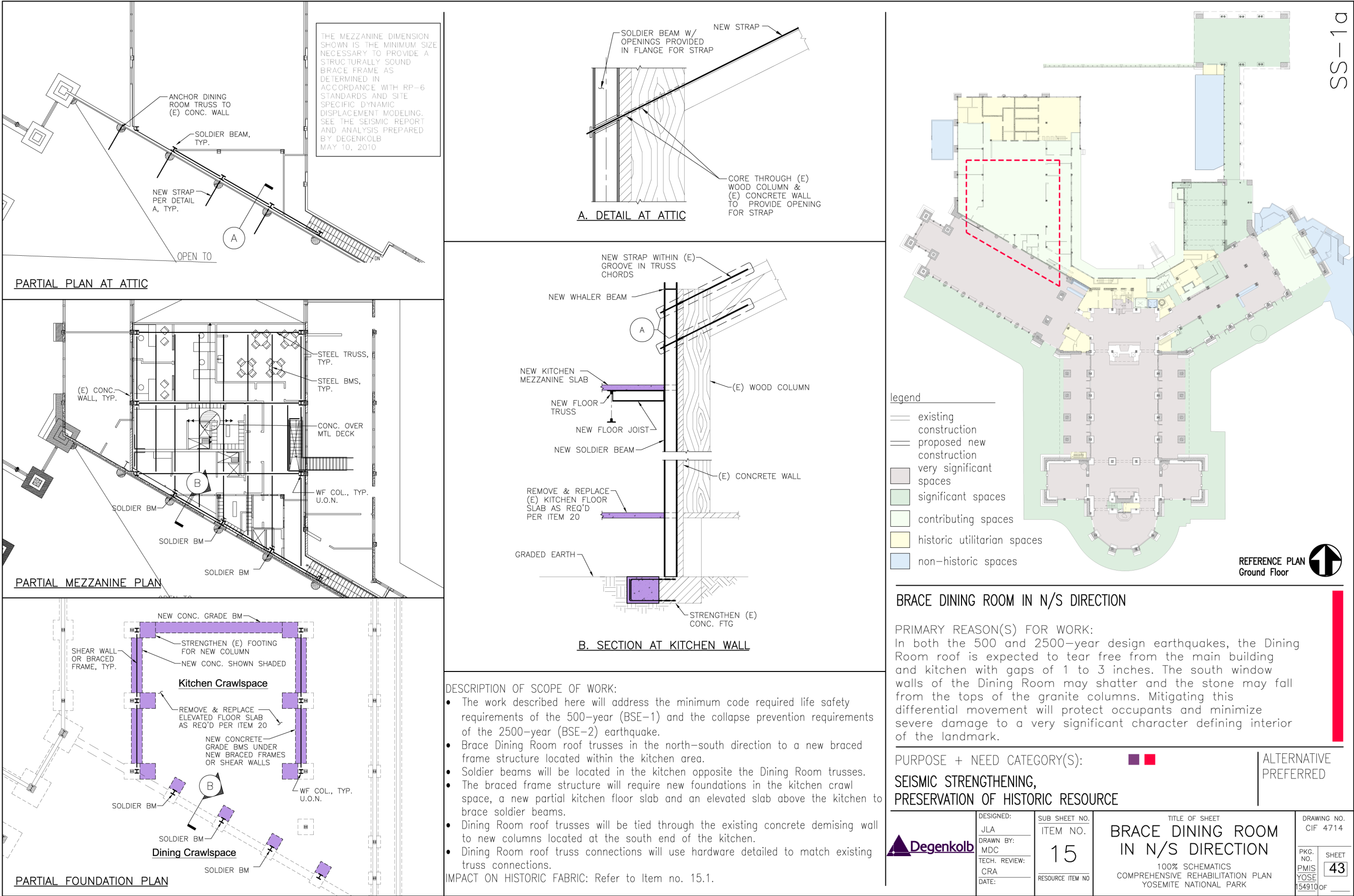


Figure B-3 Bracing of dining room to the kitchen, Alternatives 1 and 3

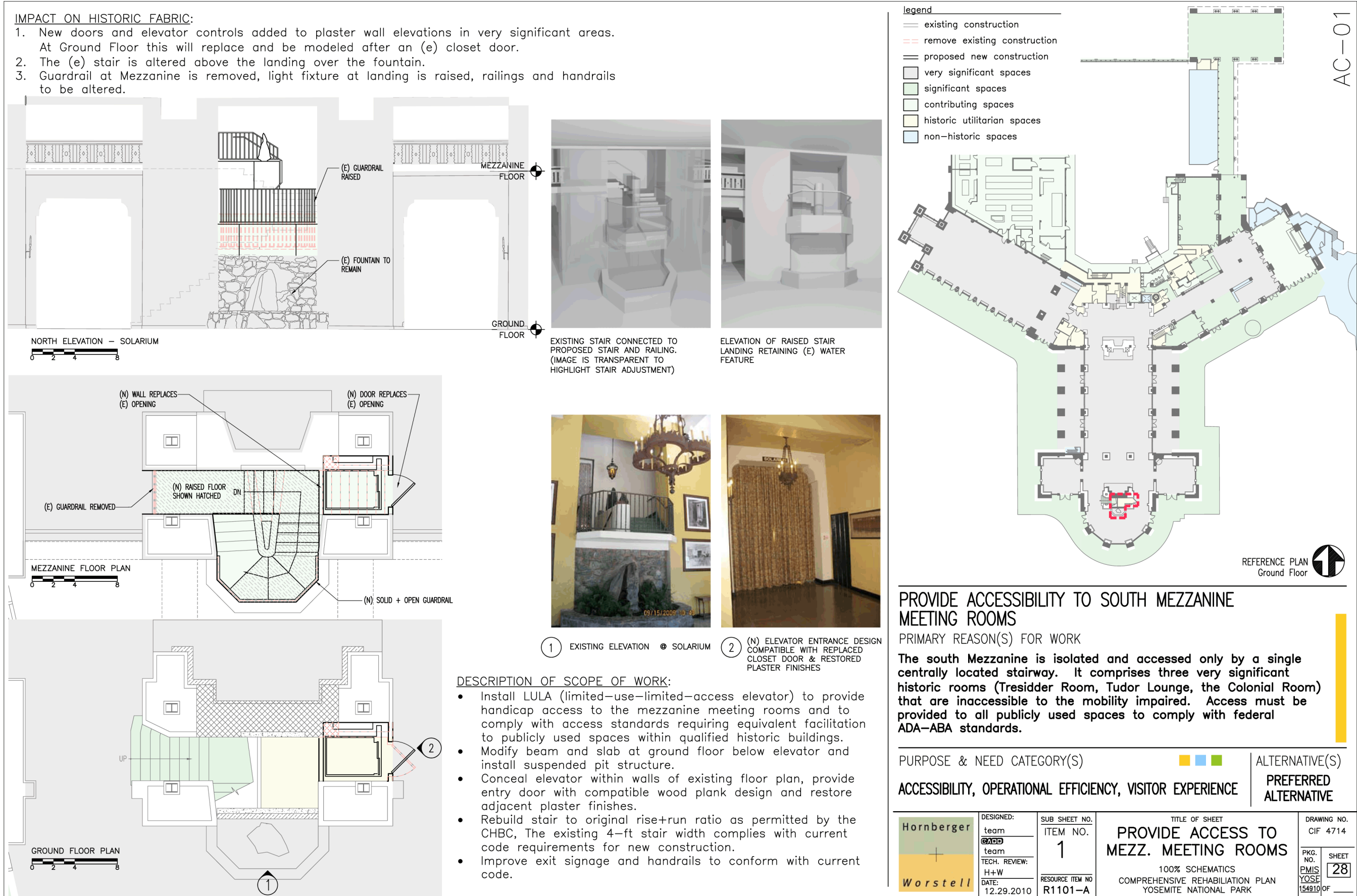


Figure B-4 Limited use/limited access elevator, Alternatives 1 and 3

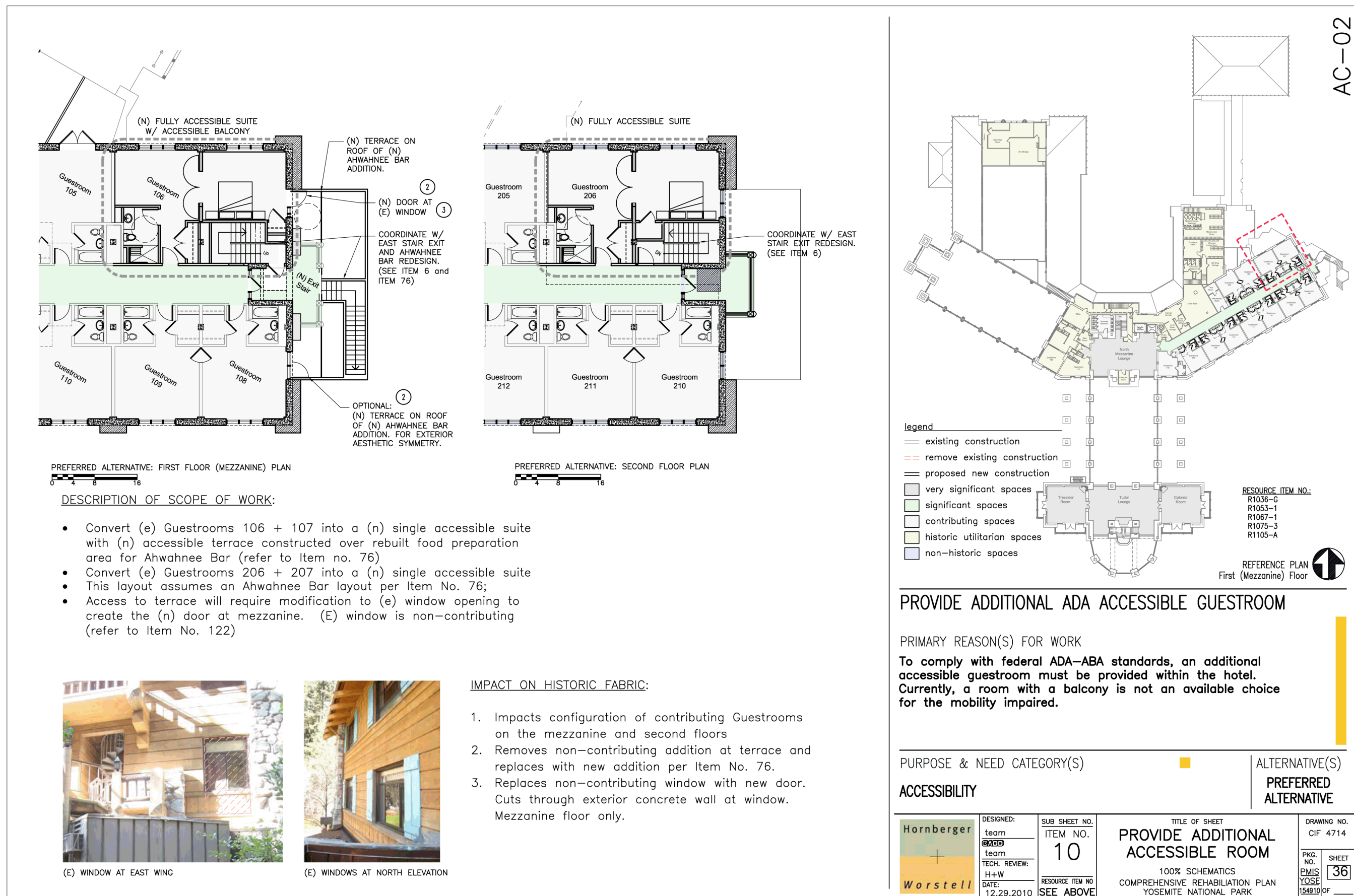


Figure B-5 Location of new accessible guestrooms, Alternatives 1 and 3

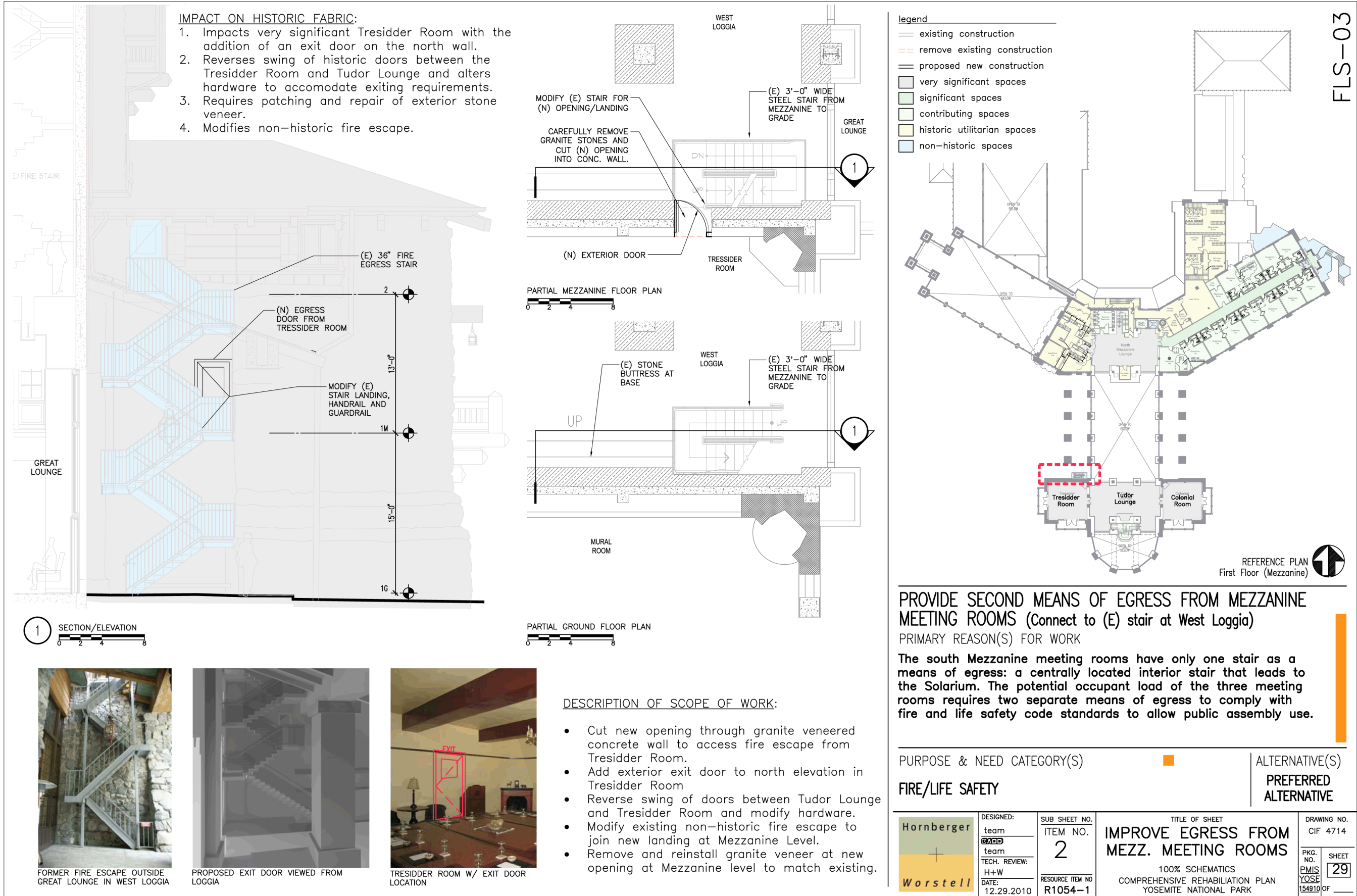


Figure B-6 Second means of egress from south mezzanine, Alternatives 2 and 3

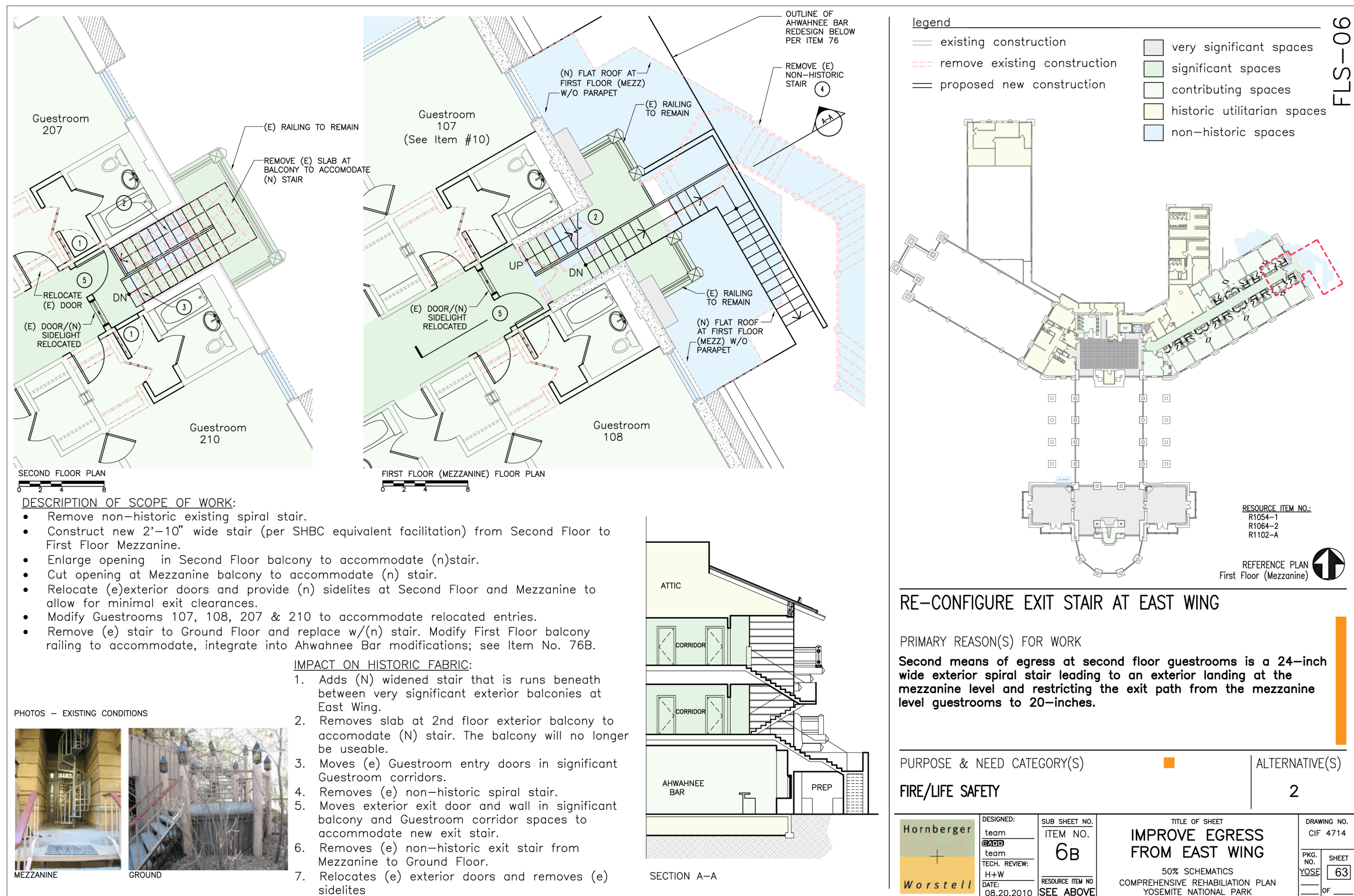
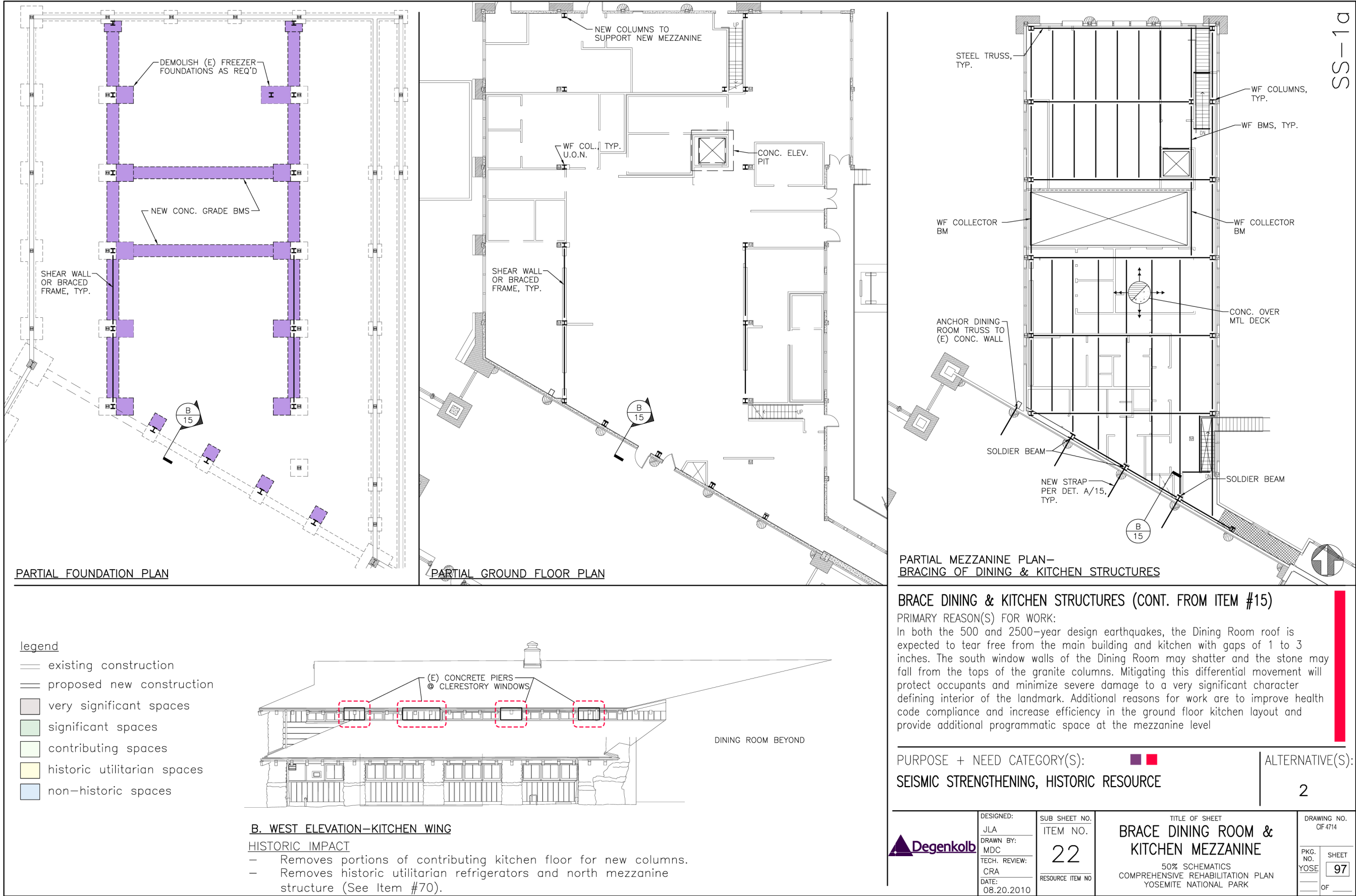
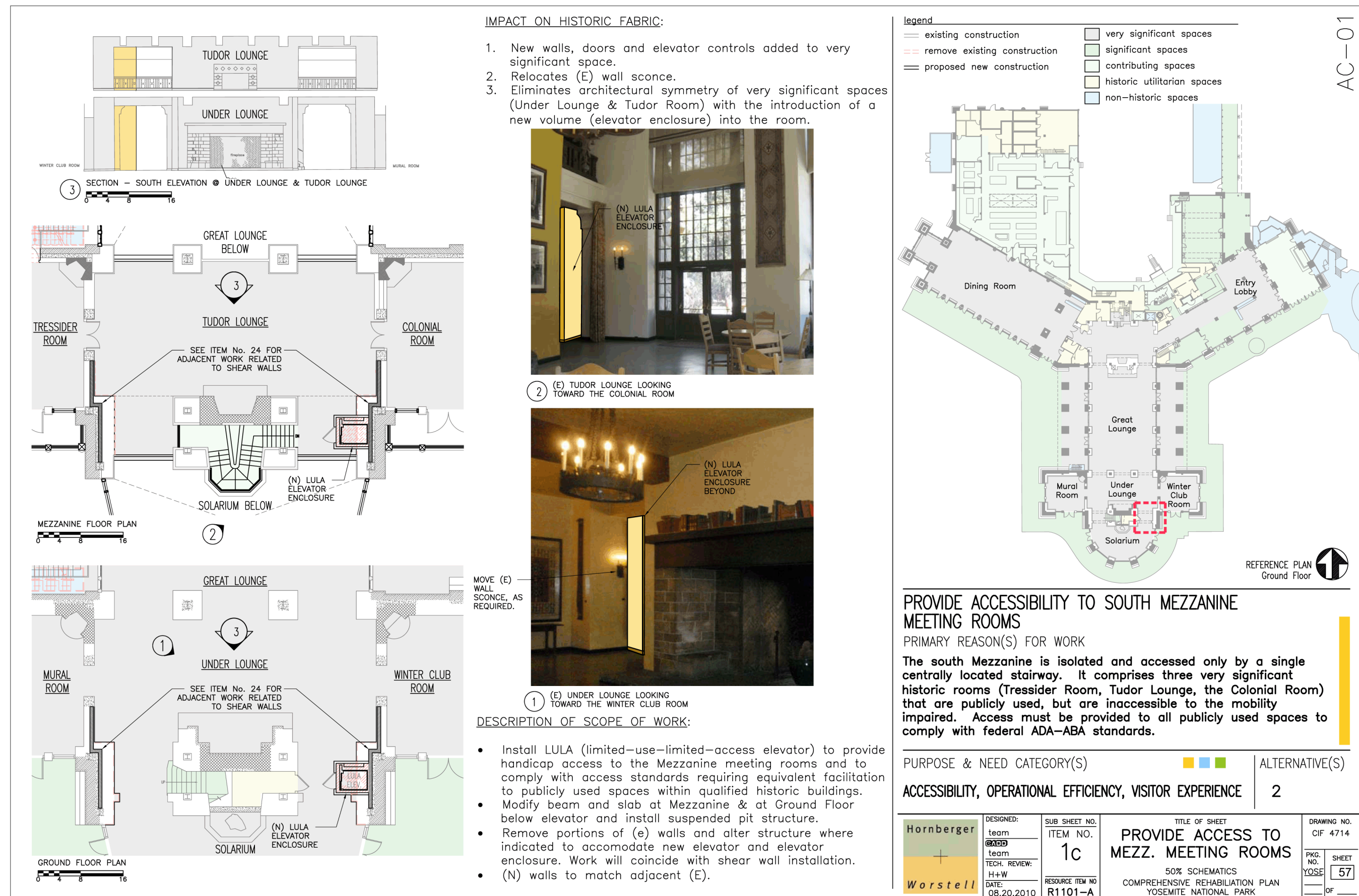


Figure B-7 East Wing egress, Alternative 2





THIS PAGE INTENTIONALLY LEFT BLANK

Appendix C: Significance Evaluation and Condition Assessment

(Excerpted from Architectural Resources Group 2011)

THIS PAGE INTENTIONALLY LEFT BLANK

SIGNIFICANCE EVALUATION OF THE HOTEL BY AREA

This section explains the significance ratings for The Ahwahnee's exterior and interior spaces and features as related to the hotel's overall historic context and character. For a historic resource to retain its significance, its character-defining features and spaces must be kept to the greatest extent possible. An understanding of a building's character-defining features is a crucial step in developing a rehabilitation plan that incorporates appropriate levels of restoration, rehabilitation, maintenance, and protection. Management and treatment approaches may vary based on the relative level of importance of spaces. This section defines significance ratings and contains color-coded floor plans identifying areas by hierarchical importance.

Methodology in Determining Significance Ratings

Defining and assigning significance ratings to the interior and exterior requires consideration of multiple factors: amount of original historic fabric, quality of materials and finishes, extent of prior modification, levels of integrity, and expression of original design intent.

Intrinsic to the hotel building type is the separation of grand public areas, private guest rooms, and back-of-house or guest support spaces. The interior layout of The Ahwahnee and its circulation is complex. Public, private, and back-of-house spaces, existing side by side on every floor, were designed to control circulation and to limit or direct guest access. The original design concept separated The Ahwahnee's spaces based on function and resulted in varying quality of materials and finishes depending on the public's access to a particular space. In spaces that were off limits to guests, materials and finishes may have been less focused on architectural or artistic expression, but they were carefully selected for their durability or efficiency in utilitarian areas.

The Ahwahnee's nearly continuous use as a hotel has meant that most spaces retain their original functions. Levels of both material integrity and original design intent are high. Spaces and character-defining features continue to convey the hotel's historic contexts to varying degrees. The Ahwahnee's significance ratings fall into the following five categories: Very Significant, Significant, Contributing, Historic Utilitarian, and Non-Historic.

Very Significant areas, spaces, elements, and features are the major components of interior areas or the exterior that exemplify the essence of the building's design and the reason for its significance. They are essential to establishing the character of The Ahwahnee. Considered the hotel's most historically or architecturally important elements, these features must be retained. Examples of Very Significant areas include the principal public rooms, such as the Great Lounge and Dining Room, and all main building exteriors.

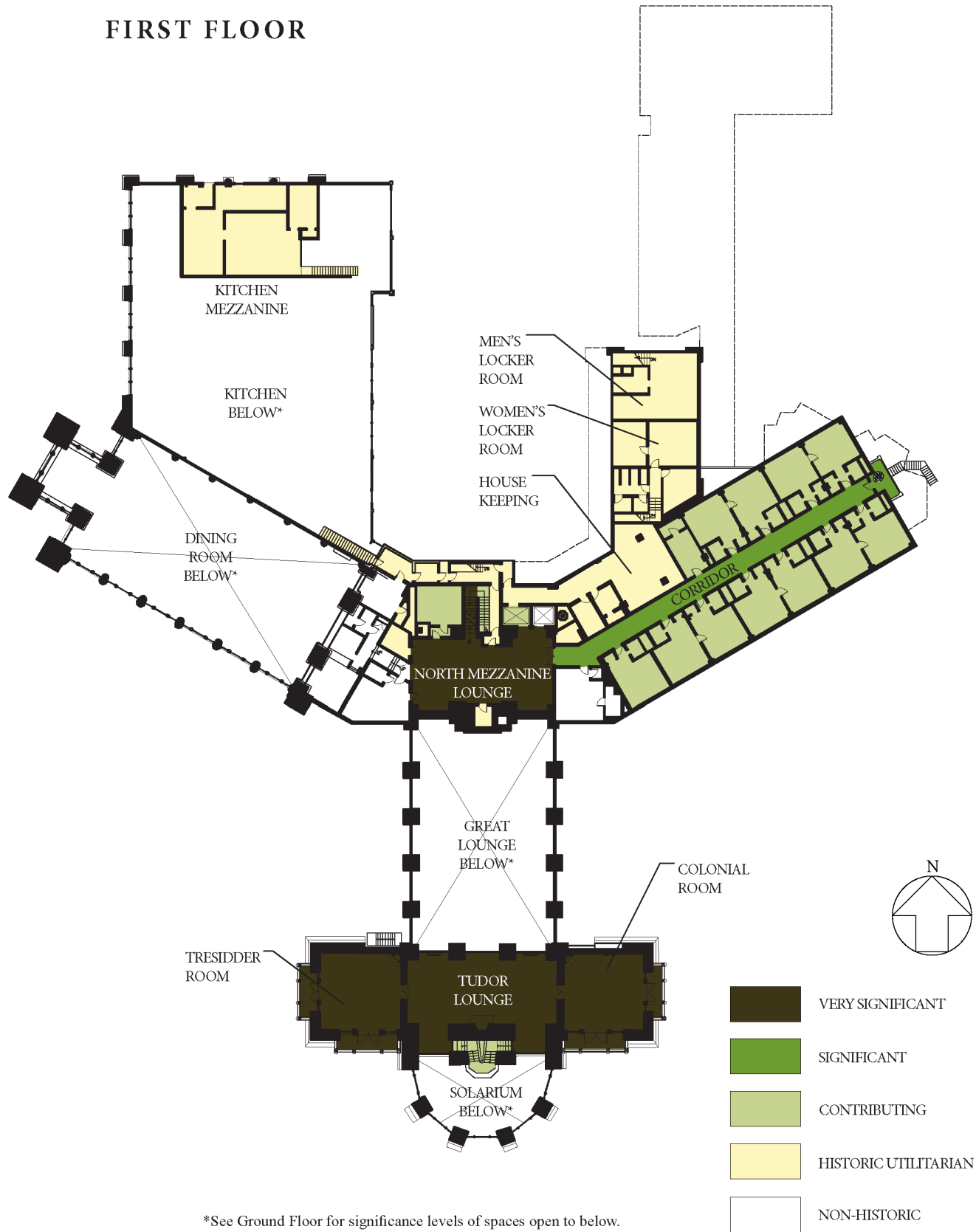
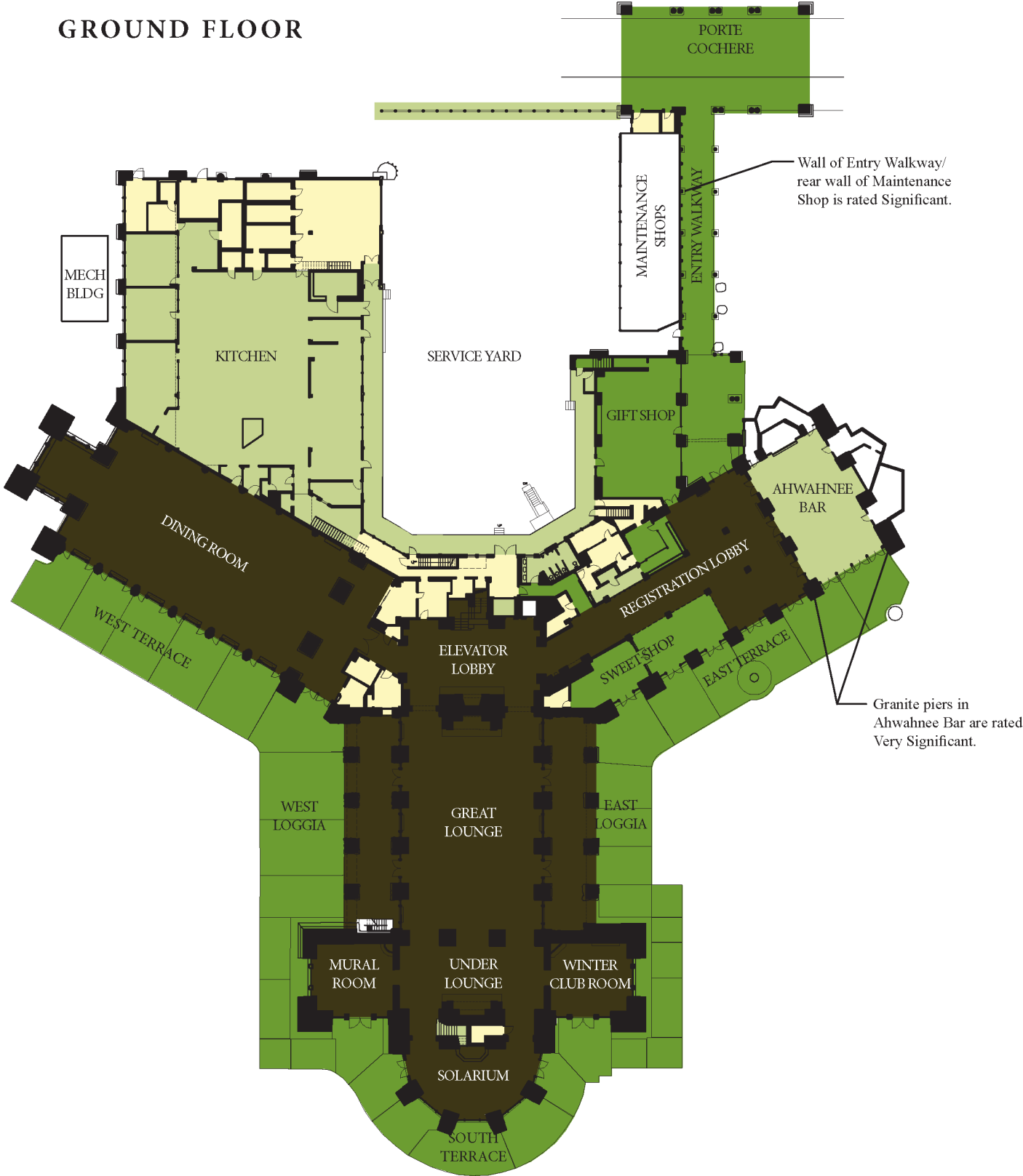
Significant areas enhance the understanding of the overall character and importance of the hotel, its original design and historic contexts, yet they may be ancillary or support Very Significant spaces. Significant areas may also include spaces that otherwise would be categorized as Very Significant but their modification over time has diminished their integrity. The Sweet Shop is one example of such a space. Alteration within these spaces may be necessary in the future to accommodate programmatic or building system requirements; however, change to these areas should be minimized. Other examples of Significant areas include the East and West Loggias, the Gift Shop, the upper floor corridors, and all Cottage exteriors.

Contributing areas add to the overall understanding of the building. Original spaces and features that have been modified, to a greater extent than Significant spaces yet retain their character, are Contributing. Spaces altered after the period of significance, but of historic or architectural importance, could also be considered Contributing. The Ahwahnee Bar is one space to which the designation of "Contributing" is assigned. This category would also include spaces of lower importance relative to the understanding of the hotel's historic context, particularly those not necessarily

designed for guest access, strictly utilitarian spaces. Alteration or removal of these features, if necessary, may be considered in an effort to meet future programmatic or building system requirements, but such changes could impact the integrity of the building. Proposed changes should be minimized to reduce their effect on historic spatial relationships and materials. Removal should be minimized if possible. Other examples of Contributing areas include the Kitchen and typical guest rooms which have been minimally altered.

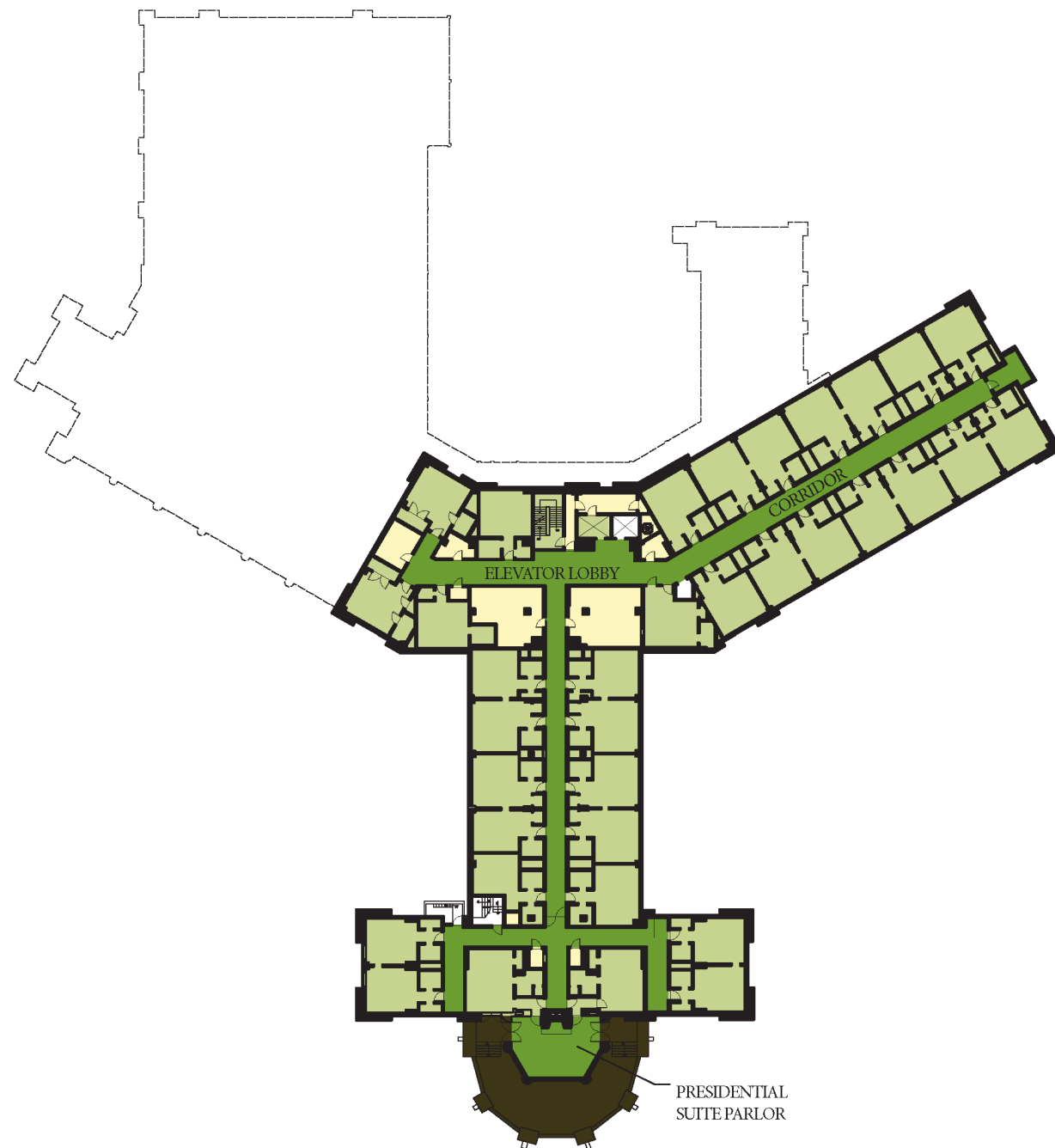
Historic Utilitarian areas are of historic importance and contribute to the hotel's character in a different manner than the hotel's grand public spaces. Historic Utilitarian areas may provide context associated with behind-the-scenes operation of the hotel, staff use, or guest support. They include utilitarian, back-of-house areas such as the Basement, attics, storage spaces, offices and other work areas. These areas may contain original historic materials and finishes. Because of limited public exposure, these areas may be more appropriate for accommodating some level of change than public spaces of the hotel. However, modification in these areas should preserve historic materials and existing spatial relationships to the maximum extent possible.

Non-Historic areas include spaces extensively altered after the period of significance or later additions that do not contribute to the historic character of the hotel. Generally, these areas can be modified. In many cases, the overall character of the hotel may be improved through alteration, redesign, or removal of non-historic areas or features. Alteration of these areas should be undertaken when the goal is to protect or enhance the overall historic character of the building. Examples of Non-Historic areas include the Diggins Suite, the passenger elevator, the south and east wing exit stairs, and the Maintenance Shops.

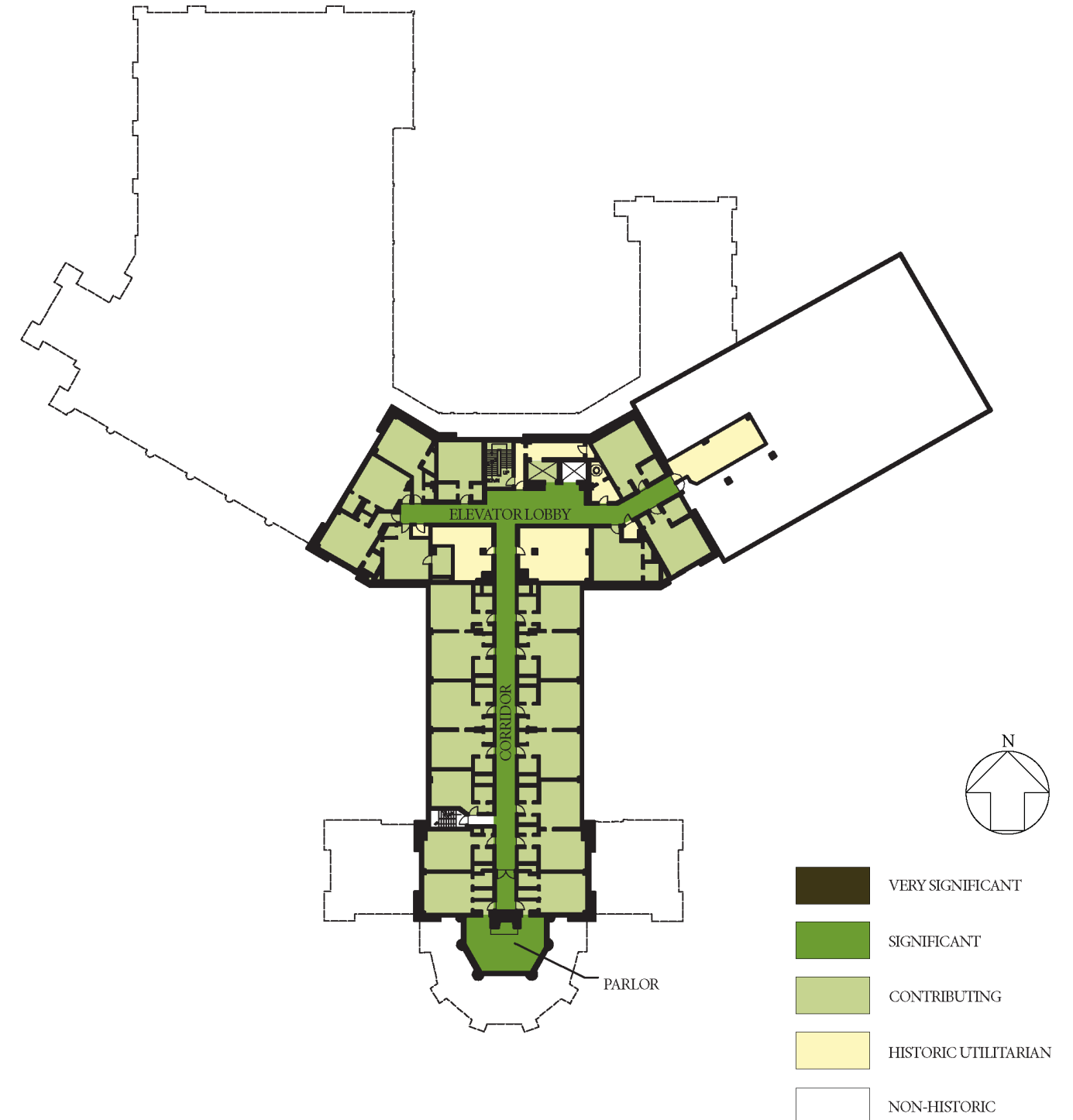


January 2011

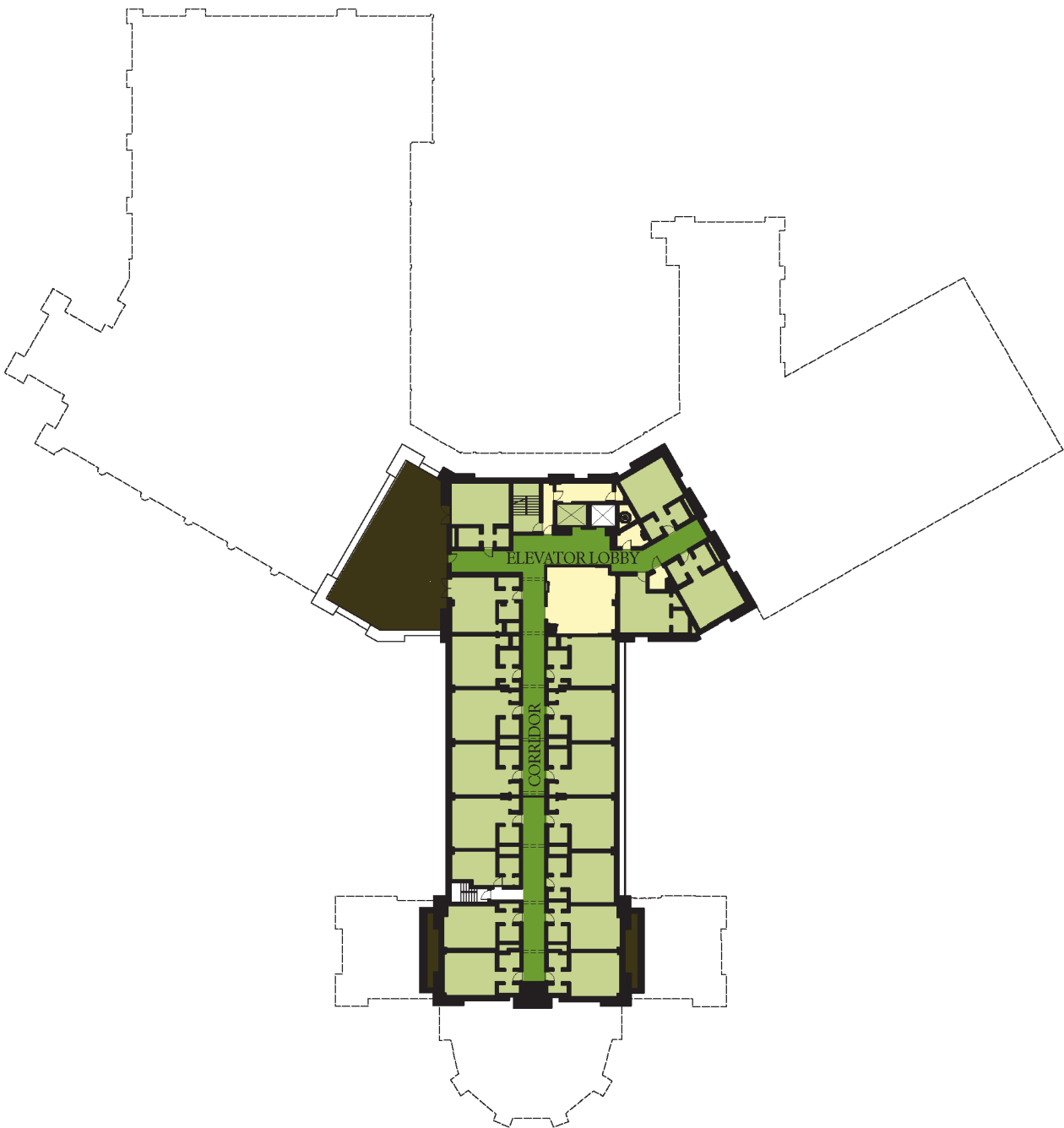
SECOND FLOOR



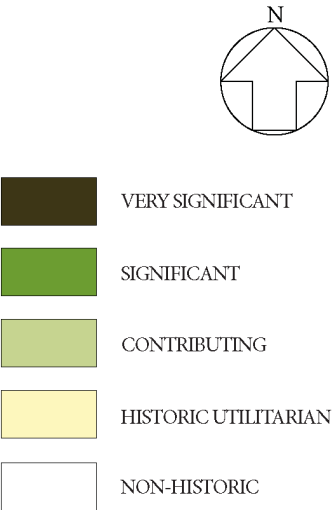
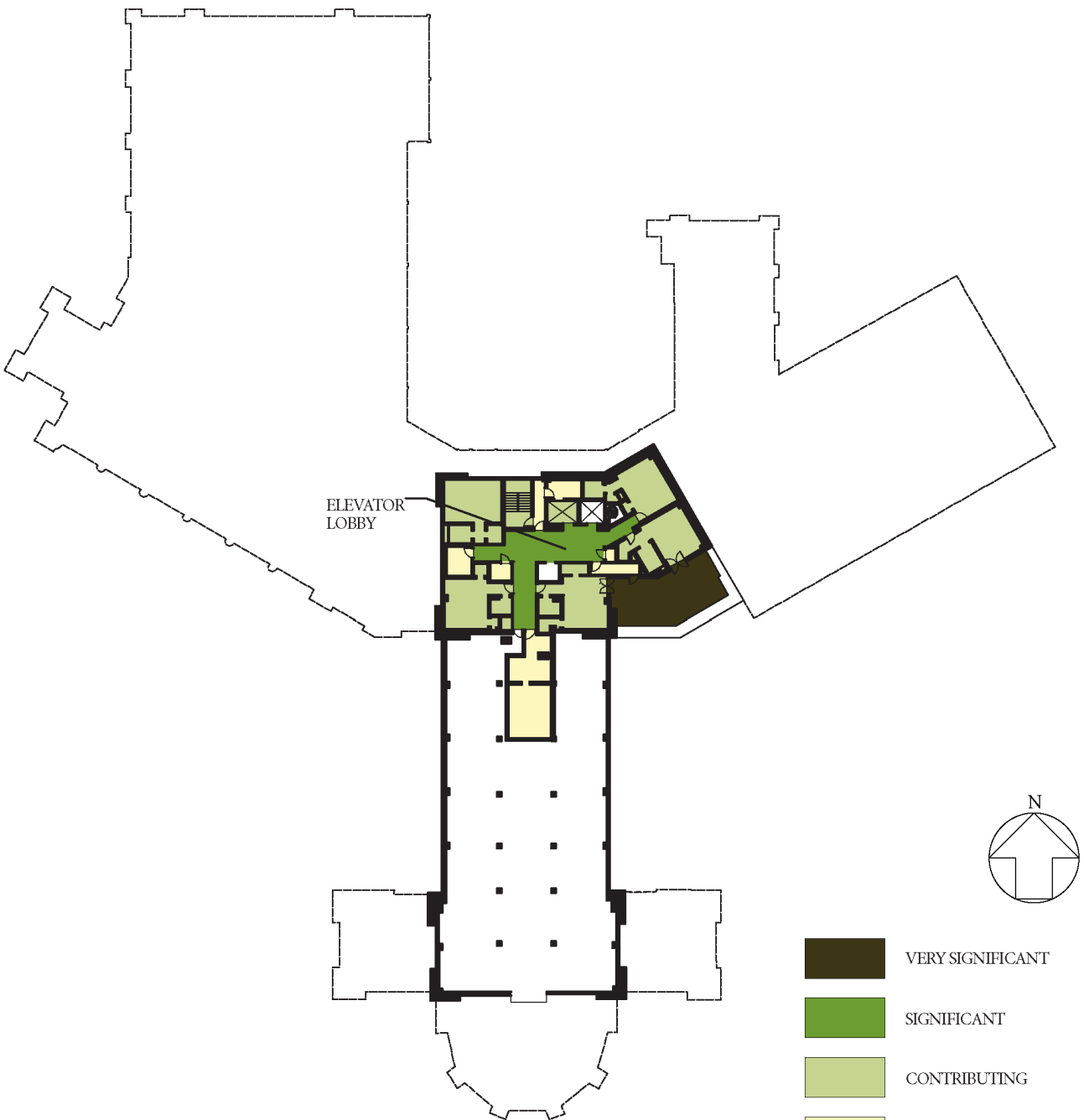
THIRD FLOOR



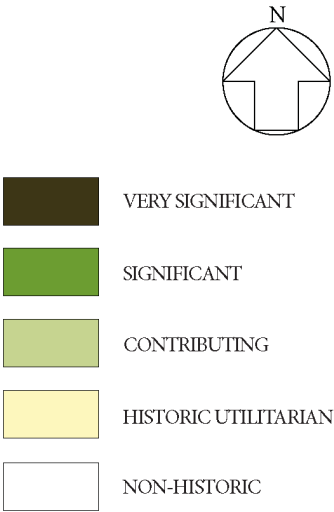
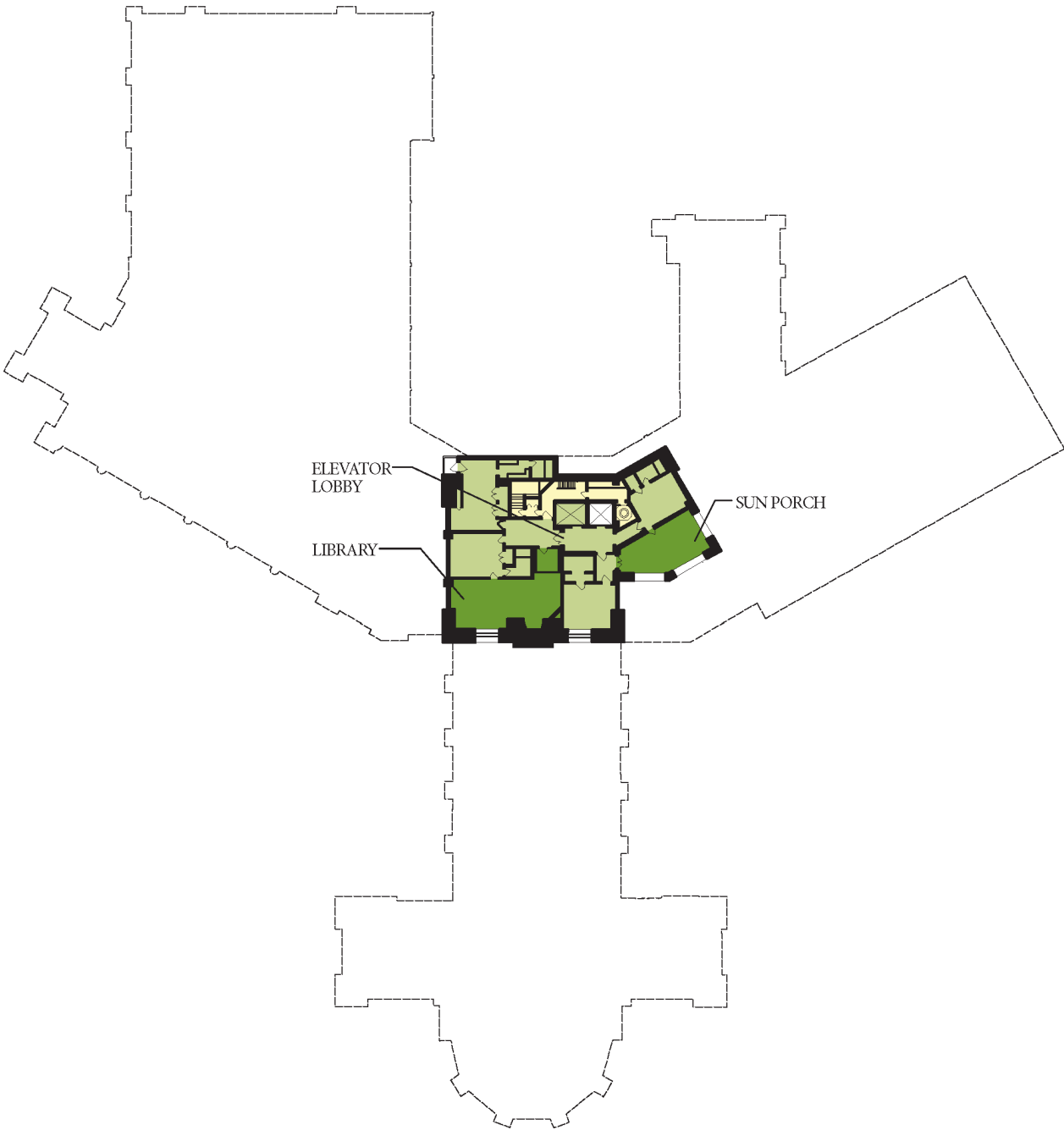
FOURTH FLOOR



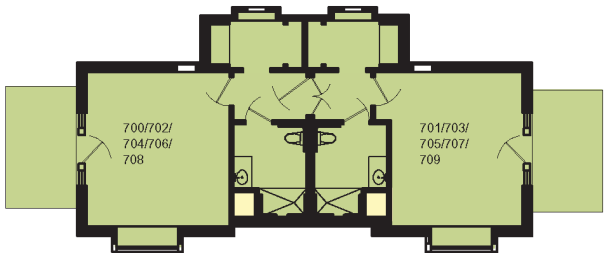
FIFTH FLOOR



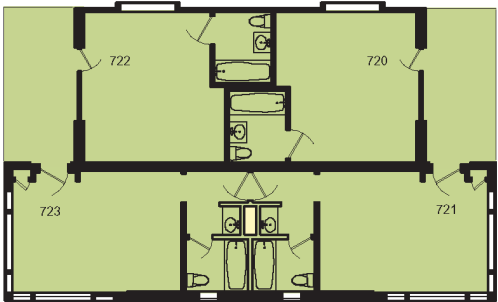
SIXTH FLOOR



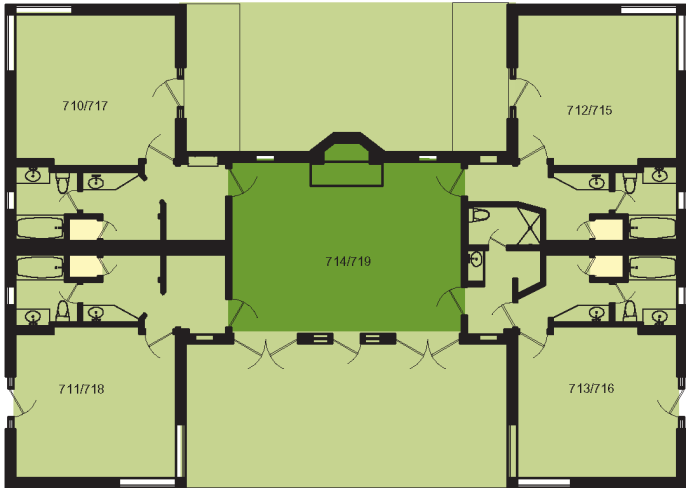
REPRESENTATIVE
COTTAGE
FLOOR PLANS



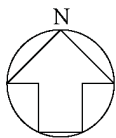
Duplex Cottage (5)



Four-plex Cottage (1)

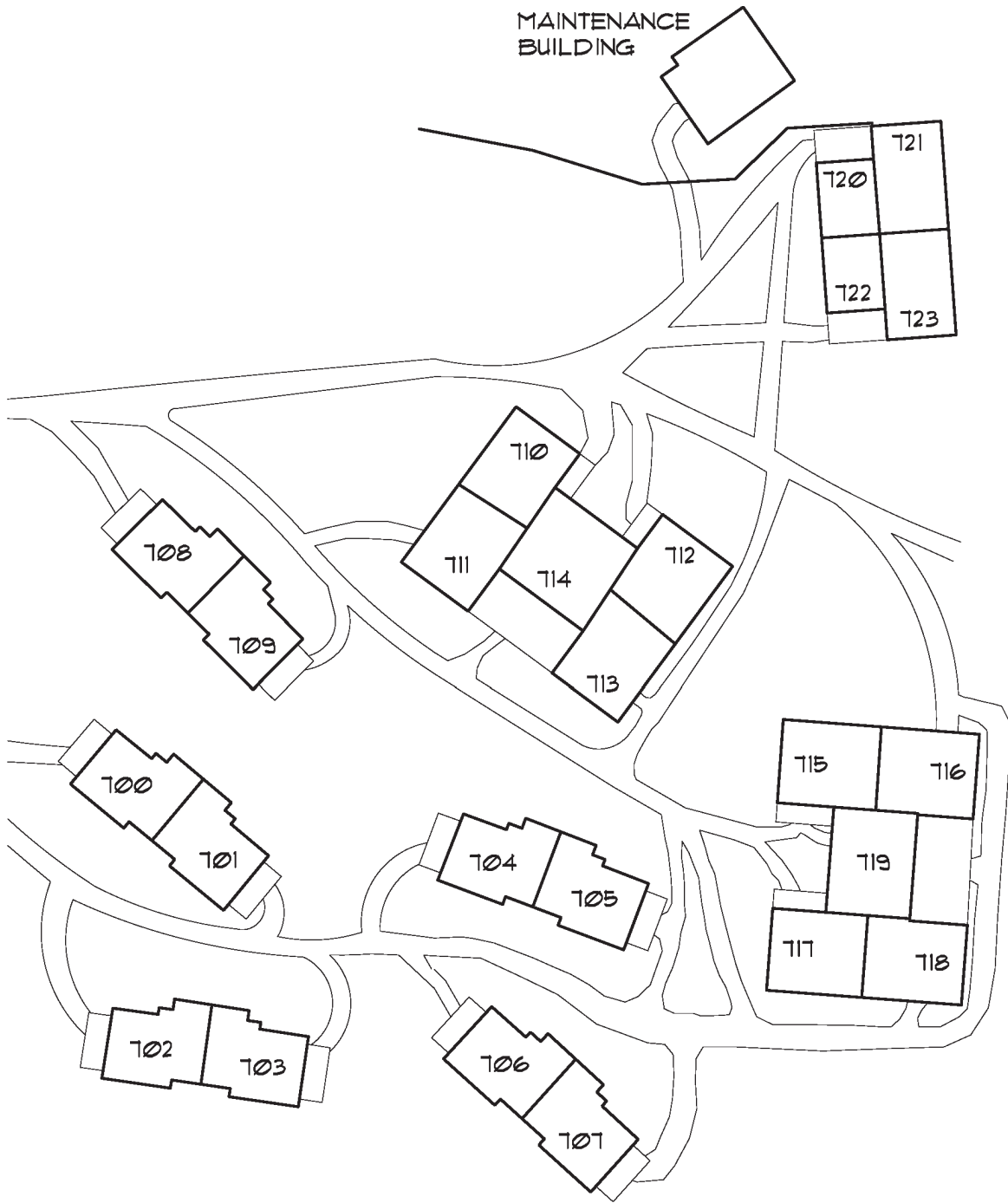


Five-plex Cottage (2)



- VERY SIGNIFICANT
- SIGNIFICANT
- CONTRIBUTING
- HISTORIC UTILITARIAN
- NON-HISTORIC

COTTAGE
KEY PLAN



CHARACTER-DEFINING FEATURES

This section lists the character-defining features of The Ahwahnee. A character-defining feature is an aspect of a building's design, construction, or detail that is representative of the building's function, type, or architectural style. Character-defining elements include the overall shape of the building, its materials, craftsmanship, decorative details, interior spaces and features, as well as the various aspects of its site and environment.¹ Generally, character-defining features date to a property's period of significance. For a historic resource to retain significance, its character-defining features must be retained to the greatest extent possible. An understanding of a building's character-defining features is a crucial step in developing a rehabilitation plan that incorporates an appropriate level of restoration, rehabilitation, maintenance, and protection.

This section identifies the exterior and interior character-defining features of The Ahwahnee main hotel building, Cottages, and ancillary structures. Within The Ahwahnee's significant spaces there may exist non-historic individual elements, such as the Service Bar in The Ahwahnee Dining Room. Conversely, within altered and modified spaces, there remain elements of historic importance, such as those that exist in the Ahwahnee Bar. This is especially true in the public spaces on the ground floor. On the upper floors, guest rooms retain their original configuration and many character-defining features.

As movable objects, the historic furnishings cannot be considered character-defining features of the hotel building itself. However, they do contribute to the historic character of The Ahwahnee. See *The Ahwahnee Historic Furnishings Report* for more information on historic furnishings and furniture.

The character-defining features are grouped as follows: main building exterior; main building interior; Cottages, and ancillary buildings.

¹ Lee H. Nelson, *Architectural Character: Identifying the Visual Aspects of Historic Buildings As an Aid to Preserving Their Character*. Preservation briefs, 17 (Washington, D.C.: U.S. Dept. of the Interior, National Park Service, Preservation Assistance Division, 1988).

Character-Defining Features at Main Building

Exterior Features and Elements

- Y-shaped plan with splayed wings
- Cruciform shape of the south wing
- Distinctive stepped massing
- Siting within the Great Meadow
- Axial orientation
- Alignment with designed scenic vistas
- Granite masonry piers and chimneys
- Porte Cochere
- Covered entrance walkway
- Loggias
- Terraces
- Cantilevered and recessed balconies (excluding first floor balcony at rooms 104 and 105 and balcony at room 605)
- Series of moderately sloped roof forms and variety of roof types, including gabled roof at Dining Room wing, hipped roofs, and shed roofs
- Fenestration patterns

Exterior Materials

- Granite masonry
- Stained reinforced concrete walls
- Log and wood wall siding
- Peeled log and wood construction at Dining Room, Porte Cochere and covered entrance walkway
- Vermont slate roofing
- Concrete rafter tails²
- Log and wood wall with painted decorative patterns between covered entrance walkway and Service Yard
- Wood-framed window walls in public areas
- Stained glass windows
- Leaded windows at sixth floor
- Steel casement windows at Service Yard

² The concrete rafter tails were repaired with fiber reinforced composite in 1977. These replacement pieces were cast from the original rafter tails and they convey the intent of the original design.

- Wood hopper windows
- Wood shutters
- Exterior wood stile and rail doors (lower panel of wood and upper panel glazed)
- Solid wood doors at service areas
- Multi-light transoms of fixed sash
- Stamped and stained concrete slabs at loggias and terraces
- Concrete decks at balconies
- Peeled log balcony railings (altered)
- Log and wood fence at north side of Service Yard
- Awnings
- Ornamental light fixtures



Figure 250: Detail view of fourth and fifth floor balconies, 2009. (Source: ARG)



Figure 251: Detail view of the granite piers at the Solarium, 2009. (Source: ARG)



Figure 252: Detail view of the Registration Lobby rubber floor tiles, 2009. (Source: ARG)



Figure 253: View of recessed bench and drinking fountain at Registration Lobby hallway, 2009. (Source: ARG)



Figure 254: Detail view of clock at registration desk, 2009. (Source: ARG)

Character-Defining Interior Features

General

- Separation of spaces based on function with public spaces on ground floor and guest rooms on upper floors
- Separation of public spaces and service areas on all floors
- Plan and volume of public rooms
- Framed views and visual connections to the exterior through window walls
- Vertical plank service doors
- Recessed wood-framed fire hose cabinets throughout
- Access doors at base of walls in corridors
- Central vacuum system baseboard outlets throughout building

Registration Lobby

- Stained concrete floors with decorative scored patterns
- Inlaid rubber tile patterns and borders
- Textured plaster walls, columns, and ceiling
- Stenciled decorative band on walls and columns
- Decorative wood wainscot and trim
- Stained wood reception counter (altered)
- Stained wood walls in current Assistant Manager's Office (altered)
- Cashier's Counter wrought-iron grilles (now relocated to doors to Assistant Manager's Office)
- Former Cashier's Counter, including carved, stained, and painted screen and transaction ledge
- Former Coat Check Room window with decorative wood panel
- Inglenook with built-in bench in hallway
- Drinking fountain in hallway with jasper stone surround
- Wrought-iron pendant light fixtures and wall sconces
- Cast-iron steam radiators
- Clock behind front desk
- Doors and windows to the Ahwahnee Bar (original doors between the Registration Lobby and the first-designed Porte Cochere)
- Wood-framed, glazed double doors to Gift Shop
- Lintel detail over Gift Shop door and service hallway opening
- Stenciled wood-paneled service window and counter in hallway
- Light fixtures

Original Porte Cochere (Ahwahnee Bar)

- Rectangular footprint and volume of original Porte Cochere
- Exposed granite piers
- Wood windows and doors to Registration Lobby
- Original door hardware

Sweet Shop

- Plaster walls
- Painted plaster ceiling with beams (stencils are non-contributing)
- Wood door and window trim
- Exterior glazed double doors and transoms
- Original, historic door hardware
- Decorative wood wainscot and trim
- Original wood casework
- Pendant light fixtures (one missing)
- Wall sconces (four missing, three located in other areas of building)

Gift Shop

- Plaster walls and ceiling with beams (stencils are non-historic)
- Glazed door (and window wall) on east wall
- Divided-light transom windows on west wall
- Light fixtures
- Doors

Elevator Lobby

- Stained concrete floors scored in a geometric pattern
- Painted plaster walls, piers, ceiling, and beams
- Stenciled patterns on beams on north wall
- Stained, painted, and carved wood elevator surround
- Service elevator door
- Fireplace with jasper stone surround, brick firebox, cast-stone hearth, and wood mantel
- Painted mural over fireplace
- Wrought-iron pendant light fixtures and wall sconces (one wall sconce now located in Registration Lobby)
- Concrete stair to mezzanine with stamped concrete landing and iron railings
- Jasper stonework around stair to mezzanine

January 2011

Art Gallery (Hallway/Storage)

- Scored, stained concrete floor (altered – now painted)
- Wood vertical plank door flanked by two inoperable wood panels at south wall
- Transom over door to back-of-house areas at north wall (altered – painted)

Great Lounge

- Oak strip flooring with accent strips at 12 inches on center (replacement-in-kind)
- Carved wood balustrade at wall openings to North Mezzanine Lounge
- Wood walls and windows at Tudor Lounge
- Plaster walls, piers, ceiling, and beams
- Wood baseboard
- Stencils on ceiling beams (many missing)
- Stained wood doors and windows
- Stained wood wainscot
- Stained glass windows
- Fireplace with cast-stone surround and hearth, brick fire box, and wood mantel
- Wrought-iron pendant fixtures
- Cast-iron steam radiators

South Lounge (Under Lounge)

- Stained, scored concrete floors
- Textured plaster walls, ceilings, and beams
- Vertical panel wood door to storage room
- Painted wood baseboard
- Fireplace with cast-stone surround and hearth, brick fire box and wood mantel
- Wrought-iron pendant light fixtures and wall sconces

California Room (Winter Club Room)

- Scored, stained concrete floors
- Textured plaster walls, ceiling, and beams
- Faux-wood painting on beams
- Wood door and window trim

- Corner fireplace with cast-stone surround and hearth, brick fire box and wood mantel
- Wrought-iron pendant light fixture and wall sconces (altered)
- Cast-iron steam radiator and wood case

Writing Room (Mural Room)

- Stained oak flooring
- Textured plaster ceiling and beams
- Faux-wood painting on beams
- Cast-stone and brick fireplace with copper hood
- Mural on upper half of north wall
- Redwood textured wall paneling
- Brass pendant light fixture
- Cast-iron steam radiator and wood case

Solarium

- Scored, stained concrete floor (replacement-in-kind)
- Textured plaster walls, piers, ceiling, and beams
- Textured wood doors and windows with large panes of glass
- Textured wood wainscot below windows
- Wrought-iron pendant light fixtures and wall sconces
- Cast-iron steam radiators
- Fountain, rear wall, basin, low wall, all of jasper stone
- Wood railing at mezzanine
- Semi-circular shape of room
- Southern exposure of room

Dining Room

- Stained concrete flooring, scored in geometric patterns
- Granite piers and columns
- Sugar pine log trusses and pilasters
- Large glass areas on south wall
- Celotex acoustical panels set into the ceiling and all walls
- Wrought-iron pendant light fixtures and wall sconces
- Wood doors and windows
- Wood grille on north wall
- Carved wood grilles with panel backing at mezzanine level on east wall



Figure 255: Detail view of original Sweet Shop pendant light fixture, 2009. (Source: ARG)



Figure 256: Detail view of the Under Lounge fireplace, 2009. (Source: ARG)



Figure 257: Detail view of the Winter Club Room fireplace, 2009. (Source: ARG)



Figure 258: Detail view of the Solarium fountain, 2009. (Source: ARG)



Figure 259: Overall view of the Tudor Lounge, 2009. (Source: ARG)

- Plaster walls on north wall and at east end
- Plaster ceilings at east end
- Wood wainscoting at north and east walls
- Wood radiator covers below windows
- Beams faux-painted to resemble wood at edge of mezzanine
- Alcove at west end of room
- Pitched ceiling above exposed log trusses and purlins

Ancillary Dining Room Spaces

- Exposed, painted concrete floor
- Exposed, unfinished concrete floor in Cold Storage area
- Plaster walls and ceilings in offices and Coat Check Room
- Wood baseboard in offices
- Wood vertical plank doors at the offices and storage room
- Wrought-iron pendant light fixture and sconce in Coat Check Room
- Board and batten casework at west end of Coat Check Room

Barber Shop (General Manager's Office and Executive Assistant's Office)

- Plaster walls and ceilings
- Wood trim
- Vertical panel wood door
- Wrought-iron pendant

Men's Room

- Plaster walls and ceilings
- Wood vertical panel door

Kitchen Wing

- Wood refrigerator and freezer doors
- Wood-framed doors along west wall
- Plaster walls and ceilings
- Large, two-story double-height space
- Divided-light clerestory windows along east and west wall

South Mezzanine Lounge (Tudor Lounge)

- Plaster ceiling with plaster beams
- Concrete and brick fireplace (altered)
- Ornamental light fixtures
- Operable windows into Great Lounge
- Wood railings at openings to Solarium

Card Room No. 2 (Colonial Room)

- Plaster walls
- Plaster ceiling with beams
- Wood doors and window trim
- Brick and wood corner fireplace with tile hearth (altered)
- Ornamental light fixtures (altered, moved)

Card Room No. 1 (Tresidder Room)

- Painted plaster walls
- Painted plaster ceiling with beams
- Wood door and window trim
- Concrete and wood corner fireplace (altered)
- Ornamental light fixtures

Women's Lounge (North Mezzanine Lounge)

- Scored, stained concrete floor
- Painted plaster walls and ceilings
- Faux-painting to resemble wood on plaster beams
- Symmetrical arrangement of room in east-west direction (altered)
- Wood railings to Great Lounge (altered)
- Stencils at elevator doors (possibly original)

Private Dining Room (Diggins Suite)

- Plaster walls at the perimeter
- Wood baseboard
- Wood stile and rail doors
- Wall sconce in hallway (originally located in Sweet Shop)
- Cylindrical wrought-iron pendant light fixture in hallway (possibly not in original historic location)

January 2011

Beauty Parlor (Room 117)

- Plaster walls at the perimeter
- Plaster ceilings
- Carved wood stile and rail door at east wall

Women's Check Room (Accessible Unisex Restroom)

- Painted plaster walls
- Wood stile and rail door (altered)

Women's Room

- White octagonal floor tiles in janitor's closet
- Painted plaster walls and ceilings
- Wood stile and rail doors

Projection Room (Business Center)

- Painter plaster walls and ceilings
- Wood stile and rail door

Manager's Office and Secretary's Office (Room 116)

- Plaster walls at perimeter and ceilings
- Wood stile and rail door from North Mezzanine Lounge
- Wood stile and rail closet door

First through Fifth Floor Elevator Lobbies and Corridors

- Plaster walls
- Plaster ceilings with plaster beams
- Wood baseboards and door trim
- Stencils at elevators (altered)
- Stencils at ceiling beams (altered)

Guest Rooms in Main Building

- General organization of rooms with bath and closet
- Stencils at top of walls (altered)
- Wood room doors and brass hardware
- Transoms over room doors with stenciled patterns
- Plaster walls and ceilings
- Wood baseboard, window and door trim
- Squared wall cabinets with doors, Tyrolean style (altered)

Second and Third Floor Parlors (Rooms 234 and 334)

- Vestibules between parlors and adjacent rooms
- Wood room doors and brass hardware
- Decorative wood wainscot, painted
- Fireplaces
- Plaster walls and ceilings
- Wood baseboard, window and door trim
- Ceiling hung light fixtures
- Wall sconces in vestibules

Sixth Floor**Sun Porch (Room 603)**

- Operable glazed walls on south and west walls
- Log railing outside operable walls (altered)

Tresidder Suite (Library, Room 602)

- Leaded glass windows in wood frames
- Wood paneling and trim
- Built-in wood bookcases
- Concrete fireplace
- Pitched plaster ceiling with beams (damaged and hidden from view above current ceiling)

Other Sixth Floor Guest Rooms

- Leaded glass windows in wood frames
- Pitched plaster ceiling with beams (damage and above current ceiling)

Storage Areas

- Painted concrete floors
- Painted plaster walls and ceilings
- Wood baseboards
- Wood doors



Figure 260: Detail view of light fixture in the North Mezzanine Lounge, 2009. (Source: ARG)



Figure 261: View of wall paneling in former Library, now room 602, 2009. (Source: ARG)



Figure 262: Detail view of dumbwaiter in Basement, 2009. (Source: ARG)

Maids and Janitors Closets (Linen Closets)

- Exposed, unfinished concrete floors
- Plaster walls and ceilings (some ceilings altered)
- Wood stile and rail doors
- Utilitarian light fixtures (altered)
- Service sinks

Service Hallways

- Painted concrete floors with integral concrete bases (most areas)
- Plaster walls and ceilings
- Wood stile and rail doors (some areas)
- Utilitarian light fixtures in service elevator lobbies
- Wood crash rails

Housekeeping Spaces

- Wood baseboard
- Wood doors and windows
- Built-in wood counters and shelves

Employee Locker Rooms

- Concrete stairs and floors with integral concrete base
- Plaster walls and ceiling (altered in toilet rooms)
- Wood stile and rails doors (altered)

Basement

- Unpainted concrete floor
- Board-formed concrete walls and ceilings (painted)
- Wood stile and rail door (possibly original)
- Dumbwaiter
- Painted sign to Basement and Boiler Room

Elevator Penthouse

- Fiberboard floors and walls
- Concrete floor and walls
- Elevator hoisting equipment

Maintenance Shops

- Concrete and wood floors
- Wood framing
- Wood posts and corbels

The Ahwahnee Cottages

Exterior

- Gabled roof forms
- Concrete foundations
- Vertical and horizontal wood siding
- Wood doors and frames (modified)
- Stenciling at door surrounds
- Painted decorative wood signs at gable ends
- Stone chimneys
- Wood shake roofing
- Notched rafter ends
- Wood grilles at gable ends
- Stained wood trim at top of wall and soffit
- Projecting windows
- Stained wood trim at projecting windows
- Concrete patio floors
- Wooded and semi-secluded setting

Interior - Guest Rooms

- Light-colored wood paneling and paneled doors
- Gypsum board walls and ceilings
- Deep projecting windows
- Connecting doors to adjacent rooms
- Wood floors (now covered with carpet)

Interior - Bathrooms

- Dressing areas separate from bath and toilet rooms

Interior - Living Rooms

- Stone fireplaces
- Light fixtures
- Exposed roof framing with decorative ridge beam
- Light-colored wood paneling and paneled doors
- Wall of glazed wood-framed doors

Transformer House (Maintenance Building)

- Wood siding
- Concrete floor
- Gypsum board walls and ceilings
- Industrial light fixture

Cooks and Supply Building (Employee Dormitory)

***Exterior*³**

- Wood siding
- Asphalt shingle roof
- Wood stairs
- Long, narrow form of building
- Single gable roof form
- Exterior wood ladders

Interior

- Long narrow double loaded hallway
- Plywood ceilings
- Plywood and wood batten walls

³ The Employee Dormitory is not designated as contributing but is important for its association with the naval hospital. These are the character-defining features associated with its historic importance.

EVALUATION OF INTEGRITY

Integrity is the ability of a property to convey its historic significance. Integrity involves seven aspects: location, design, setting, materials, workmanship, feeling and association.¹ These aspects closely relate to the resource’s significance and should be primarily intact for designation. Depending on the significance criterion, some aspects of integrity are more critical to conveying the building’s historic significance.

A property that is significant for architectural merit must retain the historic elements that characterize the type, period, or method of construction that the property represents. Retention of design, workmanship, and materials is usually more important than location, setting, feeling, and association when determining integrity. Location and setting are important for properties whose design is a reflection of their immediate environment.

The following integrity evaluation applies to The Ahwahnee, the hotel’s main building and Cottages. The Employee Dormitory is evaluated separately. The table that follows this evaluation provides a summary of integrity of specific elements and spaces within The Ahwahnee.

Location

Location is the place where the historic property was constructed or the place where the historic event occurred. The main building and Cottages retain their original siting. The Ahwahnee retains a high level of integrity of location.

Design

Design is the combination of elements that create the form, plan, space, structure, and style of a property. Between 1924 and 1929 Underwood designed lodges or hotels for six other National Parks.

Before The Ahwahnee, Underwood had previously designed other successful park hotels in the rustic style for the Grand Canyon North Rim Lodge, Bryce Canyon Lodge, and Zion Lodge. Compared to these hotels, The Ahwahnee represents a more complex design in terms of plan configuration, stepped massing, variety of intersecting roof forms, and use of indigenous materials on the exterior. All these original design features remain intact at The Ahwahnee, and it retains a high degree of design integrity.

Designed by architect Ted Spencer and completed in 1928, the Cottages were historically used for guest accommodation and continue to do so with relatively minimal change. The design and historic character of The Ahwahnee Cottages tends toward the residential, considering the single-story forms, use of patios, and general low-slung quality. The Cottages contrast to the main building in scale and in simplicity of plan and form. Both the main building and Cottages retain a high level of design integrity.

Setting

Setting is the physical environment of a historic property, constituting topographic features, vegetation, man-made features, and relationships between buildings or open space. Located on a 35-acre site at the east end of Yosemite Valley, The Ahwahnee sits at the base of the Royal Arches just north of the Wild and Scenic Merced River in a setting that remains largely unchanged. The building’s immediate siting and relationship of the principal facade to the Great Meadow largely defines the setting. Although there have been changes to the immediate site due to maturation of vegetation, the resulting alteration in perception, to and from the building, and the relationship of the building to the Great Meadow is still clearly conveyed. Integrity with regard to setting remains high. See *The Ahwahnee Cultural Landscape Report* for further discussion of the setting.

Materials

Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. The Ahwahnee’s

primary building materials are steel, rough-cut granite at the piers and chimneys, innovatively used stained concrete to achieve the appearance of wood, log and wood siding, and wood-framed window walls. The steel frame construction and other materials were chosen for fireproof considerations. The exterior materials were extremely durable and of the highest quality. Over time, windows, roofs, balcony paving, rafter tails and beam ends have been replaced. The materials of the Porte Cochere and covered entrance walkway have been entirely replaced in-kind. Material integrity at the main building has been somewhat diminished by these modifications, but not to the degree to jeopardize the hotels’ overall historic character.

Also constructed with high-quality materials, the Cottages retain their original stone chimneys, vertical board and horizontal lapped wood siding, trim, and historic signs. Windows, exterior doors, except those to the patios, and patio paving are replacements. The Cottages have a medium to high degree of material integrity. Overall, The Ahwahnee retains a medium to high degree of material integrity.

Workmanship

Workmanship is the physical evidence of the crafts of a particular culture, people, or artisan during any given period in history or pre-history. The relatively good condition of exterior materials is due to their high quality, and also to the quality of the original workmanship and techniques, many of which are no longer part of common construction practice. This is true at the main building and the Cottages. The overall integrity of the workmanship remains high.

Feeling

Feeling is a property’s expression of the aesthetic or historical sense of a particular period of time. The quality of feeling of The Ahwahnee has been diminished by material modifications stated above, especially the window replacements of the 1970s. Despite changes, the hotel’s setting is such that it retains much of the original feeling of a 1927 luxury hotel. Overall, The Ahwahnee has a high level of integrity of feeling.

¹ Patrick W. Andrus and Rebecca H. Shrimpton, *How to Apply the National Register Criteria for Evaluation* (Washington, D.C.: U.S. Department of the Interior, 1994).

Association

Association is the direct link between an important historic event or person and a historic property. Because The Ahwahnee retains its original use, many aspects of its original design, exterior and interior, its historical associations remain strong. It is associated with the development of National Park Service concessions and the National Park Service visitorship to Yosemite National Park. It is also associated with individuals such as, Stephen Mather, members of the Curry family, the architect Gilbert Stanley Underwood, and other designers. The Ahwahnee as a whole retains a high level of integrity of association.

Summary of Integrity

Except for during the military period, The Ahwahnee’s nearly continuous use as a hotel has meant that most spaces retain their original functions. The Cottages were historically used for guest accommodation and continue to do so with relatively minimal change. Most changes have been in response to trends in the hospitality industry or to replace deteriorated and worn materials. In terms of volume, massing, materials and original design intent, the building is intact. Weighing all aspects together, The Ahwahnee retains high integrity. No aspect is totally lacking. While some aspects have been diminished over time, it is not to the degree that the overall integrity is insufficient to convey its significance.

Integrity of the Cooks and Supply Building (Employee Dormitory)

The Employee Dormitory was constructed outside the period of significance. It does not contribute to nor detract from the integrity of The Ahwahnee. The Employee Dormitory may possess some historic importance for its association with the military period; however, its historic significance has not been established. An detailed integrity evaluation of the Employee Dormitory may be of value at a future date, if it is found to be historically significant.

The Employee Dormitory has been moved a short distance from its original location to an area adjacent to the parking lot. Its integrity of location is minimally diminished due to its proximity to its original site. As an ancillary building, the Employee Dormitory’s setting was, and remains, defined by that of The Ahwahnee, and the relationship between the two buildings did not significantly change when the Employee Dormitory was moved. The Employee Dormitory retains integrity of setting. As a simple utilitarian building constructed without high design values, the Employee Dormitory retains its original massing, footprint and expression and a fairly high degree of design integrity. It has been altered by the replacement of windows, doors and porches on the exterior and the replacement of lighting and flooring in the interior. Thus, integrity of materials and workmanship has been diminished. Due to its architectural expression, integrity of feeling is largely retained. Though its use as housing for Navy cooks and a storeroom has changed slightly in its current use as employee accommodations, the Employee Dormitory retains its association as a building with support functions for The Ahwahnee. The Employee Dormitory retains high levels of integrity of feeling and association. Overall, the Employee Dormitory retains medium to high levels of integrity.

Evaluation of Integrity by Space and Element

A matrix that addresses integrity for the spaces and elements of The Ahwahnee buildings follows. This table is provided as a general guide to restoration of these elements and spaces with regard to integrity. Due to the complex nature of The Ahwahnee, levels of significance, integrity and conditions have been assigned to exterior elements and interior spaces as reflected in the table on the following pages.

Integrity Evaluation Definitions

Significance classifications are defined in the “Significance of the Hotel by Area” section. Integrity classifications are defined as:

High	Most of the original materials, function and design are extant and the area or feature portrays the same character and design as it did during the period of significance.
Medium	Many of the character-defining features, original function and design are extant, but modifications have reduced somewhat the ability of the area or space to convey its historical significance.
Low	Little of the original materials, function and design remain, but the area or feature still retains some ability to convey historic significance.
None	The space or feature has been so altered that it no longer conveys historic significance.

Definitions of condition ratings are:

Good	The space or element requires only routine maintenance and cleaning.
Fair	The space or element shows signs of wear and requires minor repairs in addition to routine maintenance and cleaning.
Poor	The space or element is extensively worn and needs major repairs or restoration.

For further information on conditions see Part II - *Condition Assessment*.

January 2011

Table Summarizing Significance, Integrity, and Overall Condition

Main Building

LOCATION	SPACE OR ELEMENT	SIGNIFICANCE LEVEL	INTEGRITY LEVEL	OVERALL CONDITION	NOTES
Exterior	Granite piers and chimneys	Very Significant	High	Good	
	Stained concrete walls	Very Significant	High	Fair	
	Concrete rafter tails	Very Significant	Medium	Fair	Rafter tails repaired with fiberglass-reinforced resin covers.
	Concrete piers and beams at balconies	Very Significant	High	Fair	
	Log column covers and rafter tails at Dining Room	Very Significant	Medium	Fair	Rafter tails replaced. Column bases are deteriorated.
	Wood shutters	Very Significant	High	Fair	Wood deteriorated, painted non-historic color.
	Large windows at ground and first floors	Very Significant	High	Fair	
	Original wood windows	Very Significant	High	Fair	
	Guest room windows	Non-Historic	N/A	Good	Original wood windows have been replaced with aluminum.
	Back-of-house and Kitchen windows	Contributing	High	Fair	Some have been blocked off or modified for vents.
	Wood doors and frames	Very Significant	High	Fair	Doors are in poor condition.
	Canvas awnings	Significant	Medium	Fair	Original canvas awning material has been replaced multiple times; awnings located on building during period of significance had various striped patterns.
	Balconies	Very Significant	Medium	Fair	See notes on specific balconies below.
	Balcony railings	Very Significant	Medium	Poor	Logs severely deteriorated, metal rods and bars added, Elevator Penthouse railing missing.
	Slate roofs	Very Significant	Medium	Good	Areas of roof in Service Yard replaced with standing-seam copper instead of slate.
	Fence at north side of Service Yard	Contributing	Medium	Poor	Wood rot at top of log posts.
	Antennas at Elevator Penthouse	Non-Historic	N/A	Fair	Decreases overall building integrity.
	Exposed plumbing on exterior walls	Non-Historic	N/A	Fair	Decreases overall building integrity.
	Porte Cochere	Significant	Medium	Good	Reconstructed.
	Covered entrance walkway	Significant	Medium	Fair	Reconstructed to match original; wood sidewalk is in poor condition.
	Covered entrance walkway west wall	Significant	High	Fair	Pavement color is faded (typical for all exterior pavement).
	West Loggia	Very Significant	High	Fair	
	East Loggia	Very Significant	High	Fair	
	West Terrace	Significant	High	Poor	Concrete paving is deteriorated.
	South Terrace	Significant	High	Fair	Concrete paving is deteriorated. Paving has heaved or settled creating cracks and is a tripping hazard.
	East Terrace	Significant	High	Poor	
	Loading dock	Contributing	Medium	Fair	
	Maintenance Shops in Service Yard	Non-Historic	N/A	Fair	

LOCATION	SPACE OR ELEMENT	SIGNIFICANCE LEVEL	INTEGRITY LEVEL	OVERALL CONDITION	NOTES
Basement	Boiler Room and Mechanical Room	Historic Utilitarian	N/A	Poor	Ground water infiltration.
Ground floor	Watchman's and Driver's Room (Valet Office) and storage room	Contributing	Medium	Fair	
	Registration Lobby	Very Significant	Medium	Fair	Spatial configuration altered with addition of Sweet Shop area. Floor is in poor condition.
	Registration Desk and Cashier's Counter	Significant	Medium	Fair	Both desks altered on staff side. Grilles at Cashier's Counter removed. Safe is contributing.
	Original Porte Cochere (Ahwahnee Bar)	Contributing	Low	Fair	Though the original Porte Cochere space was infilled after the period of significance, it retains the original stone piers and general space. Form of space and stone piers are contributing.
	Gift Shop	Significant	Medium	Fair	
	Sweet Shop	Significant	Low	Fair	Sweet Shop is currently only a third of original area size, remainder was added to Registration Lobby area.
	Elevator Lobby	Very Significant	High	Fair	
	Art Gallery (Hallway/Storage)	Historic Utilitarian	Low	Poor	The space has been divided into two back-of-house areas.
	Stair to North Mezzanine Lounge	Very Significant	High	Good	
	Great Lounge	Very Significant	High	Fair	Approximately half of stencils have been painted over.
	South Lounge (Under Lounge)	Very Significant	High	Fair	
	California Room (Winter Club Room)	Very Significant	High	Fair	
	Writing Room (Mural Room)	Very Significant	High	Fair	
	Solarium	Very Significant	High	Fair	Stair to Tudor Lounge has been altered.
	Dining Room	Very Significant	High	Good	Service bar is non-historic
	Main Kitchen	Contributing	Medium	Poor	The floor is structurally compromised, warped and uneven. Poor finishes.
	Dining Room Offices	Historic Utilitarian	Medium	Fair	
	Men's Room	Contributing	Low	Fair	Location and general layout remain. Fixtures and finishes are non-historic.
	Barber Shop (General Manager's Office)	Historic Utilitarian	Low	Fair	
	Assistant Manager's Office	Contributing	Medium	Fair	
	Cashier's Office and vault	Historic Utilitarian	Medium	Fair	
First floor / Mezzanine	South Mezzanine Lounge (Tudor Lounge)	Very Significant	Medium	Fair	
	Card Room No. 2 (Colonial Room)	Very Significant	Medium	Fair	

January 2011

Main Building continued

LOCATION	SPACE OR ELEMENT	SIGNIFICANCE LEVEL	INTEGRITY LEVEL	OVERALL CONDITION	NOTES
	Colonial Room balconies	Very Significant	High	Poor	Railings and doors are in poor condition; the concrete supports have efflorescence, spalled sections, and noticeable repairs.
	Card Room No. 1 (Tresidder Room)	Very Significant	Medium	Fair	
	Tresidder Room balconies	Very Significant	High	Poor	Railings and doors are in poor condition, the concrete supports have efflorescence and spalled sections, and noticeable repairs.
	Private Dining Room (Diggins Suite)	Non-Historic	Low	Fair	Historic uses as Private Dining Room and Diggins Bar are no longer evident.
	Women's Lounge (North Mezzanine Lounge)	Very Significant	Medium	Fair	North wall has changed at door to stair and door to women's room.
	Women's Room	Contributing	Low	Poor	Location and general layout are historic. Fixtures and finishes are not historic.
	East corridor to guest rooms	Significant	Medium	Good	Lighting is non-historic.
	Manager's Office (room 116)	Non-Historic	Low	Good	
	Beauty Parlor (room 117)	Non-Historic	Low	Fair	Historic use as Beauty Parlor is no longer evident.
	Balcony at end of east corridor	Significant	Medium	Fair	Spiral stair and stair to pool are non-historic.
	Office behind Diggins Suite (Group Services Office)	Historic Utilitarian	Low	Fair	Historic use as service pantry is no longer evident.
	Housekeeping Office	Historic Utilitarian	High	Fair	Location and general layout remain.
	Men's and Women's Locker Rooms	Historic Utilitarian	High	Fair	
	Back-of-house hallways	Historic Utilitarian	High	Fair	
	Projection Room (Business Center)	Historic Utilitarian	Low	Fair	
	Banquet Manager's Office (next to room 104)	Historic Utilitarian	Low	Fair	
	Women's Check Room (Accessible restroom)	Historic Utilitarian	Low	Fair	
	Balcony at rooms 104 and 105	Non-Historic	N/A	Poor	Water from adjacent roofs drain onto this balcony, which results in water damage to doors, deck and railing.
Second floor	Elevator Lobby	Significant	Medium	Good	
	East corridor	Significant	Medium	Good	
	Balcony at end of east corridor	Significant	Medium	Fair	Spiral stair is non-historic.
	South corridor	Significant	Medium	Good	
	Guest rooms	Contributing	Medium	Good	
	Second Floor Parlor (234)	Significant	High	Good	
	Second Floor Suite balcony	Very Significant	High	Fair	Concrete pavers are non-historic.

Main Building continued

LOCATION	SPACE OR ELEMENT	SIGNIFICANCE LEVEL	INTEGRITY LEVEL	OVERALL CONDITION	NOTES
	Storage and linen rooms	Historic Utilitarian	High	Fair	
Third floor	Elevator Lobby	Significant	Medium	Good	
	South corridor	Significant	Medium	Good	
	Guest rooms	Contributing	Medium	Good	
	Third Floor Parlor (room 334)	Significant	High	Good	
	Storage areas and maids and janitors closets (linen closets)	Historic Utilitarian	High	Fair	
Fourth floor	Elevator Lobby	Significant	Medium	Good	
	South corridor	Significant	Medium	Good	
	Guest rooms	Contributing	Medium	Good	
	Storage and linen rooms	Historic Utilitarian	High	Fair	
	Large west balcony	Very Significant	High	Fair	Decking was recently replaced with non-historic materials.
	Balcony at rooms 438 and 434	Very Significant	High	Fair	Partition at center of balcony is non-historic.
	Balcony at Rooms 426 and 430	Very Significant	High	Fair	Partition at center of balcony is non-historic.
Fifth floor	Elevator Lobby	Significant	Medium	Good	
	Guest rooms	Contributing	Medium	Good	
	Balcony	Very Significant	High	Fair	
	Storage and linen rooms	Historic Utilitarian	High	Fair	
Sixth floor	Elevator Lobby	Contributing	Low	Fair	Very low quality of remodeled finishes throughout sixth floor.
	Room 601	Contributing	Low	Fair	Historic use as a service pantry is no longer evident.
	Room 602 (Library)	Significant	Medium	Fair	Historic uses as roof garden and the Tresidder Apartment are only marginally visible.
	Room 603 (Sun Porch)	Significant	Medium	Fair	Originally was a covered balcony open on two sides, but was enclosed within period of significance.
	Room 604	Contributing	Low	Poor	Historic uses as roof garden and the Tresidder Apartment are only marginally visible.
	Balcony at northwest corner of room 605	Non-Historic	N/A	Fair	
	Room 607	Contributing	Low	Fair	Historic uses as roof garden and the Tresidder Apartment are only marginally visible.
	Service area behind elevators	Historic Utilitarian	Low	Fair	
	CATV room/kitchen	Historic Utilitarian	Low	Fair	
Elevator Penthouse	Elevator machine room	Historic Utilitarian	High	Fair	Original elevator machinery is historic.

January 2011

Main Building continued

LOCATION	SPACE OR ELEMENT	SIGNIFICANCE LEVEL	INTEGRITY LEVEL	OVERALL CONDITION	NOTES
Vertical systems	Passenger elevator	Non-Historic	N/A	Fair	
	Service elevator	Contributing	High	Fair	
	Primary stair (first to sixth floors)	Contributing	High	Fair	
	Stair from Solarium to So. Mezzanine Lounge	Contributing	Low	Good	Configuration was altered outside of the period of significance.
	Exit stair in south wing	Non-Historic	N/A	Good	
	Exit stair at east wing	Non-Historic	N/A	Fair	
	Linen chute	Contributing	High	Fair	

Cottages and Transformer House (Maintenance Building)

	LOCATION	SPACE OR ELEMENT	SIGNIFICANCE LEVEL	INTEGRITY LEVEL	OVERALL CONDI-TION	NOTES
112	Exteriors	Wood siding	Significant	High	Good	
113		Windows	Non-Historic	N/A	Fair	Original wood windows have been replaced with aluminum windows.
114		Wood shake roofs	Contributing	High	Good	Roofs were replaced.
115		Decorative painted wood signs at gables	Significant	High	Fair	
116		Projecting windows and surrounds	Significant	Medium	Fair	Aluminum windows and screens are non-historic. Finish is deteriorating at varnished wood.
117		Entrance doors	Non-Historic	N/A	Fair	Original pairs of 6-light doors replaced with 10-light doors with side panels
118		Patio doors	Significant	High	Poor	Wood is rotting at bottom rail and sill.
119		Chimneys	Significant	High	Fair	
120		Antennas	Non-Historic	N/A	Fair	Decreases overall integrity of Cottages.
121		Wall mounted light fixtures	Contributing	Medium	Fair	Metal frames over lights are non-historic.
122		Maintenance Building exteriors	Significant	Medium	Fair	Window and grille openings are boarded over.
123		Stenciled entrance door surrounds	Significant	High	Fair	
124		Entrance patios	Contributing	Low	Poor	
125		HVAC condensers and wall mounted units at interior	Non-Historic	N/A	Good	Detracts from overall integrity of Cottages.
126	Interiors	Guest rooms	Contributing	High	Fair	
127		Living rooms	Significant	High	Fair	
128		Mechanical and maintenance closets	Historic Utilitarian	Low	Poor	Floor is rotting in some of these closets.

	LOCATION	SPACE OR ELEMENT	SIGNIFICANCE LEVEL	INTEGRITY LEVEL	OVERALL CONDI- TION	NOTES
129		Maintenance Building interiors	Historic Utilitarian	Low	Poor	

Cooks and Supply Building (Employee Dormitory)

	LOCATION	SPACE OR ELEMENT	SIGNIFICANCE LEVEL	INTEGRITY LEVEL	OVERALL CONDITION	NOTES
130	Exterior	Wood siding	Contributing	Medium	Good	
131		Aluminum windows	Non-Historic	N/A	Fair	Windows were replaced. Original windows were wood, double-hung windows.
132		Metal doors	Non-Historic	N/A	Fair	
133		Roof	Contributing	High	Good	
134		Satellite dishes, exposed wiring and conduit	Non-Historic	N/A	Fair	Decreases overall integrity of Employee Dormitory exterior.
135		Steps and porches	Contributing	Medium	Fair	
136		Ramp	Non-Historic	N/A	Fair	
137	Interior	Employee rooms	Non-Historic	N/A	Fair	
138		Hallway	Non-Historic	N/A	Fair	
139		Toilet and shower rooms	Non-Historic	N/A	Fair	
140		Kitchen	Non-Historic	N/A	Fair	
141		Office	Non-Historic	N/A	Fair	
142		Living room (community room)	Non-Historic	N/A	Fair	
143		Laundry room	Non-Historic	N/A	Good	

Mechanical Building

	LOCATION	SPACE OR ELEMENT	SIGNIFICANCE LEVEL	INTEGRITY LEVEL	OVERALL CONDITION	NOTES
144	Exterior	Wood siding	Non-Historic	N/A	Good	Constructed in 1989.
145		Slate roof	Non-Historic	N/A	Good	Constructed in 1989.
146	Interior	Mechanical Room	Non-Historic	N/A	Good	Constructed in 1989.

Appendix D: Cumulative Plans and Projects

This appendix presents a summarized list and subsequent detailed descriptions of past, current, and reasonably foreseeable plans and projects that have been evaluated in conjunction with the impacts of an alternative to determine if they have any additive effects on a particular resource. The cumulative impacts analysis is presented in Chapter 3 of this environmental assessment.

Summary

Past Actions

- The Ahwahnee Hotel Install ADA Compliant Elevator Controls
- The Ahwahnee Interim Rockfall Parking Plan
- Replace Ahwahnee Dormitory Steam Line
- Comprehensive Roof Replacement Project
- Yosemite Valley Shuttle Bus Stop Improvements
- The Ahwahnee Fire and Life Safety Improvements Project
- Provide Secondary Egress from 5th and 6th Floors
- The Ahwahnee Hotel Kitchen, Install FRP Board
- Ahwahnee Rehabilitate Historic Light Fixtures
- The Ahwahnee Hotel Interior Decoration Projects 2010-11
- The Ahwahnee Hotel ADA Restroom Improvements
- The Ahwahnee Hotel Stabilize Kitchen Floor

Current Actions

- Merced Wild and Scenic River Comprehensive Management Plan
- Parkwide Invasive Plant Management Plan Update
- Scenic Vista Management Plan
- 2009 Fire Management Plan
- East Yosemite Valley Utilities Improvement Plan
- The Ahwahnee Hotel Improve Porte Cochère Access Walkways and Fence

Reasonably Foreseeable Actions

- Concessioner Parking Lot Restoration Project
- Parkwide Rehabilitation of Concessioner Operated Fireplaces
- Correct Grease Trap Design Deficiencies
- The Ahwahnee Dormitory Seismic Upgrades
- The Ahwahnee Hotel Recondition Pool
- The Ahwahnee Hotel Ground Floor Exterior Door Replication Test

Past Actions

Agency Name: National Park Service, Yosemite National Park

Project Name: The Ahwahnee, Install ADA Compliant Elevator Controls

Description: The purpose of this project was to correct ADA deficiencies at The Ahwahnee hotel passenger elevator. The following items were corrected to meet those standards: The current call buttons (interior and exterior) were recessed, too high from the floor and their identification not Braille embossed. The emergency phone was not an auto-dial / visual notification system. The door on emergency phone cabinet required pinching and/or grasping. The elevator did not have audible annunciation and no permanent Braille identification for floors or permanent rooms. The self-leveling mechanism between the elevator floor and hoistway did not work. The transition between the elevator floor and the hoistway had an abrupt rise of more than ½" on the sixth floor.

This project was completed in 2008.

Agency Name: National Park Service, Yosemite National Park

Project Name: The Ahwahnee, Interim Rockfall Parking Plan

Description: In August 2009, a rock fall occurred on the Rhombus wall high above The Ahwahnee hotel causing rock debris to scatter on certain portions of the parking lot. In response, the NPS closed 29 public parking spaces and 12 valet spaces (41 total). This project restored 41 parking spaces in a previously disturbed area near The Ahwahnee. A 40' wide by 155' long existing concrete pad (previously used for years to stage equipment and store materials) located north east of the cottages and vehicle access on an existing gravel road is now used for employee parking. The access road connects the main parking area to the valet parking, with a steel gate controlling entry. The public parking spaces affected by rock fall are now blocked with free-standing buck-and-rail fence preventing visitor parking in closed areas. Temporary lighting has been provided along a pre-existing foot path to the concrete pad. A slatted buck-and-rail fencing has been constructed along the edges of the concrete pad to provide screening to prevent vehicular lights from intruding on visitors staying overnight in the nearby cottages.

Agency Name: National Park Service, Yosemite National Park

Project Name: Replace Ahwahnee Dormitory Steam Line

Description: The purpose of this project was to replace the existing steam line from The Ahwahnee hotel to The Ahwahnee dormitory for consistent and cost effective heating, for energy efficient operations, and to eliminate conflicts with the hotel chiller. Steam from the hotel is piped from the hotel to the dormitory to provide for hot water and heating. Frequent steam line failures were causing excessive and costly repairs that only last two or three years. The loss of steam caused the boilers to run continuously causing excessive use of fuel and energy. In addition, since the ruptured steam line ran under the chiller building, excess heat entered the chiller building, which defeated the purpose of the chiller. Further, the steam from ruptured pipes was damaging trees, shrubs, and grasses in the pathway of the line. In 2005, an engineering firm

investigated and developed a plan to install a new line alongside the existing line. The plan allowed for the replacement in the same location with little or no additional disturbance, thereby minimizing resource impacts.

Agency Name: National Park Service, Yosemite National Park

Project Name: **Comprehensive Roof Replacement Project**

Description: Two areas of The Ahwahnee hotel's slate roof were deficient: one area located on the roof of The Ahwahnee Kitchen, and a lower level roof that slopes both west and east from the gable. Both sections sustain heavy snow loads that shed from the upper Dining Room roof above. The slate of the lower kitchen roof was broken in these areas. Additionally, the snow accumulation on the lower kitchen roof was causing a "water dam" and snow melt run-off pooled against the roof seam, leaking into The Ahwahnee Kitchen and Dining Room.

Agency Name: National Park Service, Yosemite National Park

Project Name: **Yosemite Valley Shuttle Bus Stop Improvements**

Description: This project consisted of the preparation of preliminary design plans, environmental compliance documents, and construction drawings; the construction of six, 10-foot by 80-foot concrete braking pads, and the rehabilitation or replacement of 94,000 square feet of asphalt road approaches and the construction of bus stop shelters. The shuttle bus stop at the Ahwahnee was improved with this project.

Agency Name: National Park Service, Yosemite National Park

Project Name: **The Ahwahnee Fire and Life-Safety Improvements Project**

Description: The Fire and Life-Safety Improvements Project for The Ahwahnee involved the installation of automatic fire sprinklers, fire/smoke detectors, and fire alarm systems throughout the National Historic Landmark building. The installation of the fire and life-safety equipment affected every room of the building and involved varying amounts of disruption to the historic finishes. Once the installation was completed, all disrupted finishes were restored with in-kind repairs and finishes. Improvements to fire-safe the 2nd floor corridor and to widen the existing exterior south stair from the 2nd floor to ground level were completed to meet code.

Agency Name: National Park Service, Yosemite National Park

Project Name: **Provide Secondary Egress from 5th and 6th Floors**

Description: This project provided a second means of fire egress from the fifth and sixth floors of The Ahwahnee hotel. The majority of work occurred during the full closure for The Ahwahnee hotel for fire sprinkler and alarm system installation in February and March 2011 to minimize impact to visitors and operations.

The project provided a second means of fire egress from the 5th and 6th floor to the existing 4th floor South Wing stair of The Ahwahnee, and improved the south egress from the 4th floor to the ground level of the hotel. The design for the 5th and 6th floor egress called for construction of a new, open interior stair from the 6th to 5th floor by modifying a guestroom on each of these two floors (607 and 502), and an existing storage closet on the 5th floor. In addition, an exit corridor through the 5th floor attic and a new enclosed stair from this attic corridor were constructed to link the new egress from the upper two floors to the existing south stair well on the 4th floor. Guestroom 439, on the 4th floor, was slightly modified.

Agency Name: National Park Service, Yosemite National Park

Project Name: **The Ahwahnee Hotel Kitchen, Install FRP Board**

Description: This project installed Fiberglass Reinforced Plastic (FRP) on the interior vertical walls of the kitchen of The Ahwahnee. The installation of FRP on many of the interior walls brought the kitchen to current standards for cleanable surfaces in commercial kitchens, and protects the historic walls from potential damage.

The FRP installation is designed to be fully removable and reversible if deemed necessary in the future. Additionally, the FRP has the potential to protect the historic plaster walls from damage caused by grease, dirt, water and steam.

Agency Name: National Park Service, Yosemite National Park

Project Name: **Ahwahnee Rehabilitate Historic Light Fixtures**

Description: This project addressed the immediate safety concerns related to the original light fixtures in The Ahwahnee hotel. A recent condition assessment of the original light fixtures concluded that there were seismic and electrical safety issues that should be immediately addressed. The original light fixtures at The Ahwahnee are character defining features of the National Historic Landmark. Ensuring that these fixtures are in good condition is essential to the protection of the historic integrity of the facility, and to the safety of guests and employees of The Ahwahnee.

The condition assessment assigned numeric safety ratings to each fixture (1 being the least safety risk and 5 being the highest safety risk). The fixtures that received a rating of 5 (24 fixtures) were not anchored to meet seismic safety codes. Fixtures that received a rating of 4 (111 fixtures) had some electrical concerns that require urgent action. Ratings of 3, 2, and 1 are minor and will be addressed in later stages of implementation of this project.

Agency Name: National Park Service, Yosemite National Park

Project Name: **The Ahwahnee Hotel Interior Decoration Projects 2010-11**

Description: This project enhanced the historic character of the National Historic Landmark building by restoring historic furnishings appropriately to the period of significance of the building (1927-1942), and appropriately decorating spaces in these buildings to either reflect or be

compatible with the period of significance. Interior decorating and furnishing projects included soft good purchasing, interior paint, wall and window coverings, carpeting, guest room furniture purchase and placement, public space furnishings, reupholstering of reserve property and historic furnishings, and bathroom fixture replacement. All projects were interior to these structures. This project did not include any modifications to historic buildings and structures. All furnishing projects were limited to refurbishment and compatibility with the period of significance, and any additional furnishings that were required for operational and modern use, were designed to be compatible to the historic structure's period of significance.

Agency Name: National Park Service, Yosemite National Park

Project Name: **The Ahwahnee Hotel ADA Restroom Improvements**

Description: The Women's and Men's public restrooms were improved during the planned closure of the Ahwahnee in February/March 2011. Existing non-historic fixtures, partitions, and finishes were replaced with historically compatible fixtures, partitions, and finishes. In the Women's restroom, the existing layout was reconfigured to allow for new ADA compliance elements. Two existing stalls were removed and a new ADA-compliant stall was placed in the northwest corner. A regular stall was placed in the northeast corner to and one sink was made ADA-compliant.

Agency Name: National Park Service, Yosemite National Park

Project Name: **The Ahwahnee – Stabilize Kitchen Floor**

Description: This project structurally strengthened and stabilized portions of the kitchen floor at The Ahwahnee National Historic Landmark. Significant portions of the kitchen floor were failing and required stabilization from below. The tile floor in the kitchen was buckled and uneven and could not support the traffic or equipment required for kitchen and food and beverage operations. This project addressed the immediate concern of stabilization prior to implementing a more comprehensive kitchen rehabilitation. This project was designed to provide a structurally sound kitchen floor and substructure for approximately ten years.

Current Actions or Plans

Agency Name: National Park Service, Yosemite National Park

Project Name: **Merced Wild and Scenic River Comprehensive Management Plan**

Description: The National Park Service is currently preparing a new comprehensive river management plan and environmental impact statement for the Merced Wild and Scenic River within Yosemite National Park. Public scoping was reopened for the new plan in 2009. The public scoping and comment period ended in February 2010.

In the new Merced Wild and Scenic River Comprehensive Management Plan, the agency will address resource protection and restoration; development (and/or removal) of lands and facilities; user capacities; and specific management measures that will be used to protect and enhance the

river's outstandingly remarkable values. The Merced River Plan/EIS will address the quantity and mixture of recreation and other public uses that may be permitted without adverse impact to the river's outstandingly remarkable values, including a discussion of the maximum number of people that may be received in the river corridor.

Agency Name: National Park Service, Yosemite National Park

Project Name: **Parkwide Invasive Plant Management Plan Update**

Description: The purpose of this plan is to provide park resource managers with the necessary planning tools and procedures for effectively and efficiently managing non-native invasive plants in Yosemite National Park, including the project area. The primary goal is to create a plan that is adaptive, that allows managers to adapt to changing conditions and needs. A methodology will also be created for assessing the efficacy and impacts of new herbicides, and assessing various management guidelines and tools. Public comment for this environmental assessment document occurred in December 2010, preparation of a decision document is underway.

Agency Name: National Park Service, Yosemite National Park

Project Name: **Scenic Vista Management Plan**

Description: The Scenic Vista Management Plan will create a program with a comprehensive strategy to prioritize viewpoints for management, identify which methods of vegetation clearing area appropriate at what times and in which places, and describe what trees and brush may need to be removed to restore the view at high priority vistas, including portions of Yosemite Valley near the project area and views from the Ahwahnee Lounge, the front lawn, Dining Room, Winter Club Room and Solarium. Proposed vista management methods could include fire, mechanical thinning, and trimming.

Public comment for this document occurred in July 2010, and preparation of a decision document is underway.

Agency Name: National Park Service, Yosemite National Park

Project Name: **2009 Yosemite Fire Management Plan**

Description: The 2001 Federal Fire Policy specifically mandates public land agencies to reduce the amount of forest and shrubland fuels around areas with homes and buildings, and to restore ecosystems to a more natural, fire-tolerant balance. In response, the National Park Service has issued new fire management guidelines that require updated fire management plans. Yosemite National Park's 2009 Fire Management Plan serves to utilize the new fire management guidelines in outlining procedures for managing fire in Yosemite National Park; for restoration and maintenance of ecosystems, for reduction of hazard fuels, for protection of natural and cultural resources, and for protection of wildland urban interface communities.

Agency Name: National Park Service, Yosemite National Park

Project Name: **East Yosemite Valley Utilities Improvement Plan**

Description: The existing utility infrastructure serving Yosemite Valley was identified as a potential problem due to its age, condition inadequate capacity, inaccessibility to future facilities and inappropriate location in environmentally sensitive areas. The National Park Service completed an Environmental Assessment and a Finding of No Significant Impact for the Utilities Master Plan was signed in October 2003 to allow efficient relocation and upgrading of utility systems to provide for utility needs while reducing long-term environmental impacts from utility repair and maintenance activities. Construction of phase 1 of the improvement began in 2005 and has been ongoing with implementation of the utility improvements occurring in three phases over 10 years.

Agency Name: National Park Service, Yosemite National Park

Project Name: **Ahwahnee Hotel Improve Porte Cochère Access Walkways and Fence**

Description: The porte cochère and entry gallery are classic features of The Ahwahnee hotel providing a sense of arrival for visitors to this National Historic Landmark located in Yosemite National Park. The purpose of this project is to replace rotted wooden components along 1) the uncovered wood-plank walkway that runs along the service yard fence to the porte cochère, 2) the service yard fence and, 3) the wood-plank boardwalk in the main entry gallery. In addition to replacement of wood members, the foundation of each component identified will be addressed and improved to meet load requirements and to provide appropriate drainage away from the wood members to prevent wood rot. These existing structures have been impacted by extensive wood rot causing structural degradation, uneven walking surfaces and instability in the rails and posts supporting the fence. This project will also address some of the drainage issues under the wooden walkways.

Reasonably Foreseeable Actions

Agency Name: National Park Service, Yosemite National Park

Project Name: **Concessioner Parking Lot Restoration Project**

Description: Concessioner-assigned paved parking areas would be replaced to a maintainable condition and to provide safe access for visitors and staff. Currently, paved parking areas have significant deterioration from age, construction activities, tree root lift, rodent activity, and extreme weather. Numerous potholes, annual patching, and excessive cracks exist causing safety and concerns related to American with Disabilities and Architectural Barriers Act requirements.

As part of this project, paved areas will be evaluated individually for proper drainage, elevations, curbing, striping, and improved efficiency. The existing parking area foot prints will be retained as designated in the concessions contract for concessioner land assignments. This project will not expand any parking areas, nor will it add any parking spaces.

Agency Name: National Park Service, Yosemite National Park

Project Name: **Parkwide Rehabilitate Concessioner Operated Fireplaces**

Description: The fireplaces throughout the concessioner operations are in need of varying degrees of major to minor repairs due to their age, frequency of use, seismic activity, foundation settlement, and code requirements. The purpose of this project is to replace fireplace components, 12 fireplaces at The Ahwahnee hotel are scheduled for rehabilitation. Work may include: demolition of existing materials, replacement with in-kind fabric while retaining historic design, fire box repair, masonry improvements, and miscellaneous upgrades.

Agency Name: National Park Service, Yosemite National Park

Project Name: **Correct Grease Trap Design Deficiencies**

Description: An update to the park's Grease Management Plan was completed in 2008. The grease interceptor at the Ahwahnee was included in the study. This project would include design and construction to address recommendations regarding water temperature, grease build-up, and plumbing under the kitchen and to the underground interceptor.

Agency Name: National Park Service, Yosemite National Park

Project Name: **The Ahwahnee Dormitory Seismic Upgrades**

Description: The existing wood foundation at The Ahwahnee dormitory inadequately supports the building on unstable soil requiring ongoing stabilization repairs. This project will replace the foundation with a permanent foundation to provide long-term structural stabilization of the dormitory building. The project will also include an evaluation of the existing utilities and components located under the building floor, the building floor structure, structural elements of the building, and soil erosion and drainage issues to determine if these elements should be replaced or rehabilitated as part of the project. The design of a permanent foundation at the dormitory will also include seismic safety upgrades to the building, such as shear walls, as recommended by the seismic study done to support the Ahwahnee Rehabilitation Plan. This project is currently in the design stage and construction is tentatively scheduled for 2012.

Agency Name: National Park Service, Yosemite National Park

Project Name: **The Ahwahnee – Recondition Pool**

Description: The proposed project will include removing tile along the water line of the pool, installing a pre-cast coping and new tile at water line, repair of plaster to affected areas of tile replacement, prepping and painting the pool basin, installing an ADA-compliant gate handle, and either relocating the chlorination system or replacing the chlorine system with an acceptable alternative.

This project will begin in the fall of 2011.

Agency Name: National Park Service, Yosemite National Park

Project Name: Ahwahnee Hotel, Ground Floor Exterior Door Replication Test

Description: The purpose of this project is to replace one set of exterior ground floor doors at The Ahwahnee to serve as a design for replacement of the most severely deteriorated ground floor doors. The scope included design services and replacement of one set of exterior doors located in the Great Lounge.

This project will begin in the winter of 2011.

THIS PAGE INTENTIONALLY LEFT BLANK

Appendix E: Mitigation Measures Common to all Action Alternatives

The National Park Service places a strong emphasis on avoidance, minimization, and mitigation of impacts. Mitigation measures have been developed to help ensure that field activities associated with The Ahwahnee Comprehensive Rehabilitation Plan protect natural, cultural, and social resources and the quality of the visitor experience. The following section discusses mitigation measures that would occur prior to, during, and after construction of the proposed improvements.

Mitigation Measure	Responsibility	Critical Milestones
CONSTRUCTION MITIGATION MEASURES		
Prior to entry into the park, steam-clean heavy equipment to prevent importation of non-native plant species, tighten hydraulic fittings, ensure hydraulic hoses are in good condition and replace if damaged, and repair all petroleum leaks.	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Inspect the project to ensure that impacts stay within the parameters of the project area and do not escalate beyond the scope of the environmental assessment, as well as to ensure that the project conforms with all applicable permits or project conditions. Store all construction equipment within the delineated work limits. Confine work areas within creek channels to the smallest area necessary.	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Implement compliance monitoring to ensure that the project remains within the parameters of National Environmental Policy Act (NEPA) and National Historic Preservation Act (NHPA) compliance documents.	Yosemite National Park, Project Manager; Contractor	Concurrent with project activities
Provide a project orientation for all construction workers to increase their understanding and sensitivity to the challenges of the special environment in which they will be working.	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
If deemed necessary, demolition/construction work on weekends or federal government holidays may be authorized, with prior written approval of the Superintendent.	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Remove all tools, equipment, barricades, signs, surplus materials, and rubbish from the project work limits upon project completion. Repair any asphalt surfaces that are damaged due to work on the project to original condition. Remove all debris from the project site, including all visible concrete, timber, and metal pieces.	Yosemite National Park, Project Manager; Contractor	Upon completion of project activities
The Construction Contractor shall prepare a Health and Safety Plan to address all aspects of Contractor health and safety issues compliant with OSHA standards and other relevant regulations. The Plan shall be submitted for park review and approval prior to construction.	Contractor	Prior to and concurrent with project activities
<p>A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared by the Construction Contractor and implemented for construction activities on The Ahwahnee grounds to control surface run-off, reduce erosion, and prevent sedimentation from entering water bodies during construction. The SWPPP shall be submitted for park review and approval prior to construction. The plan will include measures such as:</p> <ul style="list-style-type: none"> Take measures to control erosion, sedimentation, and compaction, and thereby reduce water pollution and adverse water quality effects. Use silt fences, sedimentation basins, etc. in construction areas to reduce erosion, surface scouring, and discharge to water bodies To the extent possible, schedule the use of mechanical equipment during periods of low precipitation to reduce risk of accidental hydrocarbon leaks or spills. When mechanical equipment is necessary outside of low precipitation periods, use NPS– approved methods to protect soil and water from contaminants Dispose of volatile wastes and oils in approved containers for removal from construction sites to avoid contamination of soils, and drainages. Inspect equipment for hydraulic and oil leaks prior to use on construction sites, and implement inspection schedules to prevent contamination of soil and water. Keep absorbent pads, booms, and other materials on site during projects that use heavy equipment to contain oil, hydraulic fluid, solvents, and hazardous material spills 	Contractor	Prior to and concurrent with project activities

Mitigation Measure	Responsibility	Critical Milestones
CONSTRUCTION MITIGATION MEASURES (CONTINUED)		
Develop and implement a comprehensive Spill Prevention/Response Plan that complies with federal and state regulations and addresses all aspects of spill prevention, notification, emergency spill response strategies for spills occurring on land and water, reporting requirements, monitoring requirements, personnel responsibilities, response equipment type and location, and drills and training requirements. The spill prevention/response plan will be submitted to the park for review/approval prior to commencement of construction activities.	Contractor	Prior to project activities
A construction work schedule shall be prepared by the Construction Contractor for the project that minimizes effects on wildlife in adjacent habitats and peaks in visitation. The work schedule shall be submitted for park review and approval prior to construction.	Contractor	Prior to and concurrent with project activities
Supervisory construction personnel shall attend an Environmental Protection briefing provided by the park prior to working on site. This briefing is designed to familiarize workers with statutory and contractual environmental requirements and the recognition of and protection measures for archeological sites, sensitive habitats, water resources, and wildlife habitats.	Contractor	Prior to and concurrent with project activities
The park shall develop a Communications Strategy Plan to alert necessary park and concessioner employees, residents and visitors to pertinent elements of the construction work schedule.	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Identify locations of existing utilities prior to removal activity to prevent damage to utilities. The NPS maintenance staff will be informed 10 working days prior to any ground disturbance. The Underground Services Alert will be informed 72 hours prior to any ground disturbance. Construction-related activities will not proceed until the process of locating existing utilities is completed (water, wastewater, electric, communications, and telephone lines). An emergency response plan will be required of the contractor.	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Promptly reconnect utility services that are interrupted because of construction activities and provide advance notification if utility service will be disrupted.	Yosemite National Park, Project Manager; Contractor	Concurrent with and following project activities
Provide proper and timely maintenance for vehicles and equipment used during construction to reduce the potential for mechanical breakdowns.	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
HYDROLOGY AND WATER QUALITY		
All disturbed soil and fill slopes shall be stabilized in an appropriate manner.	Contractor	Prior to and concurrent with project activities
Store equipment and materials away from all waterways.	Yosemite National Park, Project Manager; Contractor	Concurrent with project activities
Wastewater contaminated with silt, grout, or other by-products from construction activities shall be contained in a holding or settling tank to prevent contaminated material from entering watercourses or wetlands.	Contractor	Concurrent with project activities
Waters shall be free of changes in turbidity that cause a nuisance or adversely affect beneficial uses. Increases in turbidity attributable to controllable water quality factors shall not exceed the following limits, as described in <i>The Water Quality Control Plan</i> for the Central Valley Regional Water Quality Control Board (CVRWQCB 2009). In determining compliance with the limits below, appropriate averaging periods may be applied, provided that beneficial uses will be fully protected <ul style="list-style-type: none"> Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU. Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20%. Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs. Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10%. 	Contractor	Prior to and concurrent with project activities
Remove hazardous waste materials generated during implementation of the project from the project site immediately.	Contractor	Concurrent with project activities

Mitigation Measure	Responsibility	Critical Milestones
HYDROLOGY AND WATER QUALITY (CONTINUED)		
Incorporate trench plugs into new and abandoned utility corridors through wetland areas where required to prevent formation or continuation of groundwater conduits.	Yosemite National Park; Project Manager; Contractor	Concurrent with project activities
Surface drainage facilities shall be designed to transport runoff in a non-erosive manner.	Yosemite National Park; Project Manager; Contractor	Prior to and concurrent with project activities
Material from construction work will be collected by the contractor and covered, and shall not be deposited where it could be eroded and carried to the stream by surface runoff or high stream flows.	Contractor	Concurrent with project activities
Schedule construction activities at drainages for seasonal periods of low or no water. On the unnamed seasonal tributary, place bridge abutments above the ordinary high water mark.	Contractor	Prior to and concurrent with project activities
Minimize disturbance area at the banks of drainages. Salvage excavated materials for replacement after construction. The banks of drainages will be restored to their pre-existing contours.	Contractor	Concurrent with project activities
At utility corridors, all trench backfill should be properly placed and adequately compacted to provide a stable subgrade.	Contractor	Concurrent with project activities
At utility corridors, adequate drainage should be provided to prevent surface water or subsurface seepage from saturating the subgrade utility corridor.	Contractor	Concurrent with project activities
VEGETATION		
Contractor will develop a Revegetation Plan in conjunction with the park's Resources Management and Science Division, to be approved prior to construction activities.	Yosemite National Park, Project Manager; Contractor	Prior to project activities
Avoid fastening ropes, cables, or fences to trees.	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
A Park Botanist will oversee placement of construction fencing to avoid impacts to sensitive plants and wetlands. Although no special status plant species are currently known to occur in the proposed construction areas, if special status plant species are identified within the construction disturbance zone, the project manager will work with the Park Botanist to avoid impacts	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
WILDLIFE (INCLUDING SPECIAL STATUS WILDLIFE)		
Provide information to the contractor regarding wildlife concerns at the project briefings, and provide contractor specifications and Best Management Practices to avoid activities that are destructive to wildlife and habitats. Project Manager will consult with the park biologist to schedule construction activities with seasonal consideration of wildlife lifecycles to minimize impacts during sensitive periods (i.e., after bird nesting seasons, when bats are neither hibernating nor have young, etc)	Yosemite National Park, Project Manager	Concurrent with and following project activities
In corporate wildlife exclusion during design development for pathway, roadway, and improvements at the hotel terrace in consultation with NPS subject-matter experts.	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Limit the effects of light and noise on adjacent habitat through controls on construction equipment. No outdoor construction activities are to occur between dusk and dawn to eliminate the need for outdoor construction lighting, and to avoid disruption of mating, nesting, or foraging owls.	Yosemite National Park, Project Manager; Contractor	Prior to and concurrent with project activities
Prior to tree trimming or removal, a park wildlife biologist will first survey (within 4 days prior to any such work) to determine whether there are any nests present, and advise as to whether the activity must be delayed to ensure that sensitive species such as nesting migratory birds are protected and not disrupted.	Yosemite National Park, Project Manager working with the park wildlife biologist	Prior to project construction activities
Tree removal resulting from improvements to the fire department access road to the cottages would occur outside of the nesting season (after August and before April) in order to avoid impacts on special status bird species.	Yosemite National Park, Project Manager working with the park wildlife biologist	Concurrent with project activities

Mitigation Measure	Responsibility	Critical Milestones
WILDLIFE (INCLUDING SPECIAL STATUS WILDLIFE) (CONTINUED)		
Beginning in early spring, a park wildlife biologist will conduct bird surveys and review current owl reports to determine whether special status species are present and may be mating, nesting, or foraging in the project vicinity.	Yosemite National Park, Project Manager	Prior to project construction activities
If nesting birds are observed (e.g., discovered by workers) that are not special status species, the project manager will notify the park wildlife biologist who will recommend steps to avoid undesirable impacts to the nest or young.	Yosemite National Park, Project Manager	Prior to project construction activities
A park biologist will conduct bat surveys in the vicinity of the hotel in early summer (May-July for maternity colonies) and in fall (August-November) to locate potentially roosting/hibernating bats, and will provide specific directions for avoiding their disturbance if they are found. If bats are detected, the specific area will be protected and work on that particular area will be delayed until the bats vacate or can be excluded from the area in a manner that does not adversely affect their survival or that of their young.	Yosemite National Park, Contractor	Prior to project activities
If bats are detected during reproduction or hibernation periods, disturbance of potential habitat will be delayed until the bats can be excluded from the area in a manner that does not adversely affect their survival or that of their young.	Yosemite National Park, Project Manager, Contractor	Concurrent with project activities
If surveys conducted immediately prior to construction do not reveal any bat species present within the project area, then the action will begin within three days to prevent the destruction of any bats that could move into the area after the survey.	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
FEDERAL AND STATE PERMIT REQUIREMENTS		
The NPS will apply for and comply with all federal and state permits required for construction-related activities, including the California Regional Water Quality Control Board and the U.S. Army Corps of Engineers.	Yosemite National Park, Project Manager	Prior to project activities
AMERICAN INDIAN TRADITIONAL CULTURAL RESOURCES AND PRACTICES		
For the fire department access road improvements, a traditional cultural resource mitigation plan will be developed in consultation with the park's vegetation subject-matter experts and input from tribal consultation and monitoring.	Yosemite National Park, Project Manager, Contractor	Prior to and concurrent with project activities
Culturally associated tribes will be given notice prior to ground disturbing activities at the project site and may be present at the project site to monitor ground disturbance during construction, as stipulated in the 2011 PA.	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Continue to consult with culturally associated American Indian tribes throughout the project to avoid or mitigate damage to American Indian traditional resources, as stipulated in the 2011 PA.	Yosemite National Park, Project Manager	Prior to, concurrent with and following project activities
HISTORIC PROPERTIES		
The Park will adhere to the <i>Programmatic Agreement Between the National Park Service, Yosemite National Park and the California State Historic Preservation Officer Regarding The Ahwahnee Hotel National Historic Landmark Comprehensive Rehabilitation Program, Mariposa County, California</i> (2011 PA) to resolve adverse effects.	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
Mitigation measures to resolve adverse effects, as defined in the 2011 PA, include documentation, interpretation, and reevaluation of National Register status (updating National Register Nomination form).	Yosemite National Park, Project Manager	Prior to and concurrent with project activities
DUST ABATEMENT MEASURES		
Cover and/or seal truck beds and stockpiles to minimize blowing dust or loss of debris.	Contractor	Concurrent to project activities
Limit truck and related construction equipment speeds in active construction areas to a maximum of 15 miles per hour and strictly adhere to park regulations and posted speed limits in other areas while inside park boundaries.	Contractor	Concurrent to project activities
Maintain adequate dust suppression equipment and use clean water to control excess airborne particulates at staging areas, active construction zones, and unpaved roads leading to/from active construction areas.	Contractor	Concurrent with project activities

Mitigation Measure	Responsibility	Critical Milestones
EMERGENCY NOTIFICATION MEASURES		
Develop an emergency notification plan that complies with park, federal, and state requirements and allows contractors to properly notify park, federal, and/or state personnel in the event of an emergency during construction activities. This plan will address notification requirements related to fire, personnel, and/or visitor injury, releases of spilled material, evacuation processes, etc. The emergency notification plan will be submitted to the park for review/approval prior to commencement of construction activities.	Yosemite National Park, Project Manager	Prior to project activities
EROSION CONTROL MEASURES		
Conserve and salvage topsoil for reuse. Materials will be reused to the maximum extent possible.	Contractor	Concurrent with project activities
HAZARDOUS MATERIALS MEASURES		
An Oil and Hazardous Materials Spill Prevention, Control, and Countermeasure Plan shall be prepared by the Construction Contractor for the project to address hazardous materials storage, spill prevention and response. The Plan shall be submitted for park review and approval prior to construction.	Contractor	Prior to and concurrent with project activities
Store and use all hazardous materials in compliance with federal regulations. All applicable Materials Safety Data Sheets will be kept on site for inspection.	Contractor	Concurrent with project activities
Hazardous or flammable chemicals shall be prohibited from storage in the staging area, except for those substances identified in the Oil and Hazardous Materials Spill Prevention, Control, and Countermeasure Plan. Hazardous waste materials shall be immediately removed from project site in approved containers.	Contractor	Concurrent with project activities
Comply with all applicable regulations and policies during the removal and remediation of asbestos, lead paint, and polychlorinated biphenyls.	Contractor	Concurrent with project activities
SOUNDSCAPES		
Ensure that all construction equipment has functional exhaust/muffler systems.	Contractor	Concurrent with project activities
Submit a construction work plan/schedule that minimizes construction-related noise in noise-sensitive areas to the park for review/approval prior to commencement of construction activities.	Contractor	Prior to project activities
Use hydraulically or electrically powered construction equipment, when feasible.	Contractor	Concurrent with project activities
Locate stationary noise sources as far from sensitive receptors as possible.	Contractor	Concurrent with project activities
Limit the idling of motors except as necessary (e.g., concrete mixing trucks).	Contractor	Concurrent with project activities
To the extent possible, perform all on-site noisy work above 76 A-weighted decibels (dBA) (such as the operation of heavy equipment) between the hours of 9:00 a.m. and 5:00 p.m., or as directed by hotel management, to minimize disruption to hotel guests.	Contractor	Concurrent with project activities
SCENIC RESOURCES PROTECTION MEASURES		
Fence construction staging areas and construction activity areas to visually screen construction activity and materials.	Contractor	Concurrent with project activities
Consolidate construction equipment and materials to the staging areas at the end of each work day to limit the visual intrusion of construction equipment during nonwork hours	Contractor	Concurrent with project activities
TRAFFIC CONTROL AND VISITOR PROTECTION MEASURES		
Provide protective fencing enclosures around construction areas, including utility trenches, to protect public health and safety.	Contractor	Concurrent with project activities
TRANSPORTATION MEASURES		
Install appropriate traffic signs and barriers.	Yosemite National Park, Project Manager	Concurrent with and following project activities
NIGHT SKY MEASURES		
All new exterior lighting installed as part of this rehabilitation project will be historically compatible and conform to the <i>Yosemite National Park Outdoor Lighting Guidelines</i> .	Yosemite National Park, Project Manager	Concurrent with and following project activities

Mitigation Measure	Responsibility	Critical Milestones
WASTE MANAGEMENT MEASURES		
Require construction personnel to adhere to park regulations concerning food storage and refuse management.	Yosemite National Park, Project Manager; Contractor	Concurrent with project activities
Properly secure trash during the workday and remove all trash from site at the end of each workday.	Yosemite National Park, Project Manager	Concurrent with and following project activities
Develop and implement a comprehensive waste management plan that complies with federal and state regulations and addresses all aspects related to the transportation, storage, and handling of construction-related hazardous and nonhazardous liquid and solid wastes and submit the plan to the park for review/approval prior to the commencement of construction activities.	Contractor	project activities

Appendix F: Merced Wild and Scenic River

Section 7 Determination

Introduction

Purpose of this Determination

In 1987, the United States Congress designated the Merced Wild and Scenic River to protect the river's free-flowing condition and to protect and enhance its unique values for the benefit and enjoyment of present and future generations (16 USC 1271). This designation gives the Merced River special protection under the Wild and Scenic Rivers Act.

The Ahwahnee Comprehensive Rehabilitation Plan includes three actions that would be located on stream tributaries to the Merced Wild and Scenic River and therefore require additional consideration under section 7(a) of the Wild and Scenic Rivers Act. The purpose of this determination is to evaluate the potential of these actions to either invade or diminish the scenic, recreational, fish, or wildlife values of the wild and scenic river.

Authority

The authority for this determination is found in section 7(a) of the Wild and Scenic Rivers Act (Public Law 90-542, as amended, 16 United States Code [USC] 271-1278). Section 7 states:

...no department or agency of the United States shall assist by loan, grant, license or otherwise in the construction of any water resources project¹ that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration. Nothing contained in the foregoing sentence, however, shall preclude licensing of, or assistance to, developments below or above a wild, scenic or recreational river area or on any stream tributary thereto which will not invade the area or unreasonable diminish the scenic, recreation, and fish and wildlife values present in the area of the date of designation of a river as a component of the national wild and scenic rivers system.

While the Wild and Scenic Rivers Act does not prohibit development along a river corridor, it does prohibit activities that would interfere with the free-flowing condition of the river or degrade the values for which it was designated wild and scenic. The Act specifies guidelines for the determination of appropriate actions in the bed and banks of the river and either below, above, or on a tributary to a wild and scenic river.

As the designated river manager for the Merced River segments located within the boundaries of Yosemite National Park, the National Park Service must carry out a determination of effects on all proposed water resources projects¹ in accordance with section 7(a) of the Act.

¹ A water resources project is any dam, water conduit, powerhouse, transmission line, or other works project under the Federal Power Act, or other developments, that would affect the free-flowing character of a wild and scenic or congressionally authorized study river. In addition to projects licensed by the Federal Energy Regulatory Commission, water resources project may include: dams, water diversions, fisheries habitat and watershed restoration, bridges and other roadway construction/reconstruction projects, bank stabilization projects, channelization projects, levee construction, boat ramps, fishing piers, and activities that require a Section 404 permit from the U.S. Army Corps of Engineers (Interagency Wild and Scenic Rivers Coordinating Council 2004.)

Methodology

While the Ahwahnee Comprehensive Rehabilitation Plan does not propose actions within the bed and banks of the Merced Wild and Scenic River, actions are proposed on two upstream tributaries. Section 7(a) of the Act provides a specific standard for review of developments below or above or on a stream tributary to a designated river. Such developments may occur as long as the project “will not invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area as of the date of designation. . . .” The section 7 evaluation for three actions associated with The Ahwahnee Comprehensive Rehabilitation Plan is based on guidance provided in the Wild and Scenic Rivers Act: Section 7 Technical Report, Appendix D: Evaluation Procedure under “Invade the Area or Unreasonably Diminish” (Interagency Wild and Scenic Rivers Coordinating Council 2004) .

The initial question to be addressed is whether or not the proposed project invades the designated river. The term “invade” is defined as “encroachment or intrusion upon.”

If the proposed project does not invade the designated river, the next question to be answered, relative to the standard in section 7(a), is whether or not the proposed project will “unreasonably diminish” any of the specified values. Given that the standard implies that some diminution of values may be determined reasonable, there are two questions to consider:

1. Does the proposed project cause diminution of the scenic, recreation, and fish and wildlife values of the designated river as present at the date of designation?
2. If there is diminution, is it unreasonable? This would suggest an evaluation of the magnitude of the loss. Factors to be considered include:
 - a. Whether the value contributed to the designation of the river (i.e., an outstandingly remarkable value); and,
 - b. The current condition and trends of the resource. (If diminution is determined unreasonable, measures may be recommended to reduce adverse effects to within acceptable levels).

Merced Wild and Scenic River Outstandingly Remarkable Values

Outstandingly remarkable values are the river-related values that make the river unique and worthy of special protection. They form the basis for the river’s designation as wild and scenic. The current version of the outstandingly remarkable values for the Merced River (January 2011) for the Yosemite Valley segment are outlined below.

Biological

The Merced River and the South Fork Merced River support a suite of riparian and meadow ecosystems within Yosemite National Park, from alpine and subalpine meadows along the river stretches above Yosemite Valley and Wawona, to the Yosemite Valley meadows, to low elevation riparian and wetland habitat. Dependent on these habitats are a variety of native, endemic, and/or rare plant and animal species. Sustained by periodic flooding and/or high water tables, these habitats are river related crossroads of life in a landscape already vibrant with productive habitats. The large, moist meadows and associated riparian communities comprise one of the largest mid-elevation meadow complexes in the Sierra Nevada, supporting an exceptional diversity of plant and animal species.

Recreational

Yosemite is a nationally and internationally renowned destination. One of America's first national parks and a World Heritage Site, the valley was originally set aside for "public use, resort, and recreation." Today, the Merced River and the South Fork Merced River provide for exceptional outdoor river-related recreational experiences. The dramatic and picturesque setting (also described in the scenic value, below) is central to these experiences. Settings range from the undeveloped wilderness of the Upper Merced and South Fork Merced River, to Yosemite Valley's views of high granite cliffs, where the roar and vibration of the river becomes especially apparent during spring runoff. Many first time visitors are awed and inspired by the rivers' natural wonders, forming for some a first connection to wild nature. Others are called back year after year, building long-lasting relationships and attachments to the rivers and their environs. For all visitors, the Merced River and the South Fork Merced River are places to experience a wild and scenic river in one of America's first and most revered national parks.

Geologic/Hydrologic

The Merced River contains geologic and hydrologic processes that continue to shape the landscape. Glacial pathways, which the river partly determined and continues to follow, resulted in the rivers' variable gradients, featuring dramatic changes in river speed and volume. The rivers flow through classic glacially carved canyons, over sheer cliffs and steep cascades exemplifying stair step river morphology and hanging valleys, through an alluvial landscape in Yosemite Valley, past a well-preserved recessional moraine, and past an exemplary boulder bar in El Portal.

Scenic

Throughout its length, the Merced River flows through a scenic landscape that has few parallels. Whether these are views from the river or its banks, and whether the views include El Capitan, Half Dome, Triple Divide Peak, or any of the other landmarks along the river, the Merced River provides a natural complement to Yosemite's world-renowned scenery. Depending on the stretch of river, the Merced provides a foreground of a flat valley, a rushing and boulder-strewn river, tall waterfalls, or serene lakes.

Rationale for Determination

The Ahwahnee Comprehensive Rehabilitation Plan Environmental Assessment provides the basis for this section 7 determination. The comprehensive rehabilitation plan is in compliance with established policies and plans providing direction for Yosemite National Park. The document also fulfills the requirements of section 102(2) C of the National Environmental Policy Act and section 106 the National Historic Preservation Act. The Affected Environment and Environmental Consequences section of the document (Chapter 3) describes the existing condition of resources in the project vicinity and analyzes the potential environmental impacts associated with implementation of each of the proposed alternatives.

Project Description

The comprehensive rehabilitation plan provides for phased, long-term rehabilitation of The Ahwahnee hotel and its associated structures in Yosemite Valley. The Ahwahnee is a NPS-owned and concessioner-operated luxury hotel that provides year-round visitor accommodations, dining, special events, and retail sales. It remains one of the more regularly visited attractions by

both day and overnight visitors to the park. The Ahwahnee hotel was listed on the National Register of Historic Places in 1977 and was designated a National Historic Landmark in 1987.

After more than 80 years in service, facilities at The Ahwahnee are not fully compliant with current fire protection and building codes, recommended seismic safety practices, and accessibility codes and guidelines. Many of the electrical, plumbing, and mechanical systems are aging and need to be replaced or updated. In addition, some historic hotel finishes and landscape components have deteriorated or been altered over the years, potentially affecting the historic integrity of this National Historic Landmark.

Action 1: Code-Required Emergency Access Road - Bridge

The existing fire department access road from The Ahwahnee hotel parking area to the cottages terminates at the service entrance to the cottages. Termination of the existing fire access road at this location is not in compliance with fire code requirements for maximum allowable distance between access roads and structures, as several cottages are too far from the service road for emergency vehicle access. (The majority of the cottages are more than 50 feet from a fire department access road, and several of the cottages are more than 150 feet from a fire department access road.) In order to meet fire code requirements for allowable distance, the existing access road would be extended south of the cottages along the alignment of an existing, unmaintained service road.

This unmaintained service road was selected for fire department access because it provides the only existing access to southern and western side of the cottage area and it is the only means to access existing fire hydrants in that area. However, this unmaintained service road is not currently compliant with fire code requirements for width, surfacing, drainage crossings, and turnarounds. In order to extend the fire department access along this alignment, this project would improve the unmaintained service road to comply with fire code specifications.

Currently, the unmaintained service road crosses an unnamed seasonal tributary to the Merced River via a hardened earth low water crossing. Low water crossings are not compliant with fire code because drainage crossings must be “all-weather,” where emergency vehicles are not subject to passing through water, ice, or soft roadbeds. Therefore, the National Park Service has determined that a bridge is required at the drainage crossing to allow emergency vehicles and personnel to access the cottages in a code-compliant manner.

Action 2: Code-Required Emergency Access Road - Culverts

The existing fire department access road to the cottages includes five culverts at drainage crossings on tributaries to the Merced River: a twin pipe culvert at Royal Arch Creek, and a single pipe culvert and a twin pipe culvert at the unnamed seasonal tributary. The road to the cottages narrows to as little as 9 feet wide over these culverts; to comply with fire code, all existing culverts may need to be improved or replaced to support road widening to a code-compliant width. In addition, it is not known if the existing culverts comply with fire code load-bearing requirements. The existing culverts would need to be modified or replaced to meet fire code requirements for road width and load weight.

Action 3: Consolidated Utility Corridor

The third action involves installing a consolidated utility corridor from the hotel to the cottages following existing circulation paths to the extent possible. Further design will dictate the exact route and distribution points the utility corridor will follow, however, the route would require crossing Royal Arch Creek, a tributary to the Merced River. It is anticipated that utilities would be suspended from underneath the existing footbridge over Royal Arch Creek.

Analysis

Considerations

Does the proposed project invade the designated Merced River?

The proposed actions would be located within the Merced Wild and Scenic River corridor, in the east end of the Yosemite Valley segment, within The Ahwahnee hotel cultural landscape. The proposed actions would occur on two tributaries to the Merced River, but would not be located within the 100-year floodplain. Culvert work would occur within the bed and banks of the tributaries and construction work could occur within the ordinary high water mark.

Potential construction impacts from these three actions would be minimized by scheduling construction activities during seasonal periods of low or no water. Additional mitigation measures would include minimizing the disturbance area at the banks of the tributaries, salvaging excavated materials for replacement after construction, returning the banks to their pre-existing contours, and implementing Best Management Practices (see Appendix E of the environmental assessment) during construction to ensure that construction activities would not affect water turbidity, temperature, or nutrient availability.

The span and abutment placement for the bridge and the final culvert dimensions would be determined by hydrologists and engineers during the design phase of the project. The bridge design and culverts would accommodate braided flow channels in order to minimize impacts to hydrologic function and free-flowing condition. In addition, the bridge abutments would be constructed outside of the ordinary high water mark and in accordance with U.S. Army Corps of Engineers and California Regional Water Quality Control Board permit stipulations. The bridge would also be designed to be low-profile and compatible with the character of the cultural landscape. In combination with the mitigation proposed above for construction activities, the bridge and culverts would not impede the free-flowing condition of the Merced River and hydrologic processes would be protected during low and high water periods.

Final design of the utility corridor would not impede hydrologic processes associated with Royal Arch Creek, as utilities would be suspended underneath an existing footbridge. The suspended utilities would not be visible from the foot path.

Therefore, the proposed actions will not encroach or intrude upon the hydrologic function of the Merced River and will not invade the wild and scenic river.

Does the proposed project unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area as of the date of designation?

1986 Sierra National Forest Draft Forest and Resource Management Plan	Merced Wild and Scenic River, Yosemite Valley Segment 2011 Draft Outstandingly Remarkable Values	The Ahwahnee Comprehensive Rehabilitation Plan Proposed Tributary Crossings
<p>Scenic</p> <p>One of the most spectacularly scenic canyons in the world, waterfalls</p>	<p>Crashing over Nevada and Vernal Falls and then meandering quietly under 2,000 foot cliffs, the Merced forms a placid foreground to some of the world's most iconic scenery. The river enters Yosemite Valley at Nevada Fall, flowing through Emerald Pool and then over Vernal Fall. Once in the flat valley, the Merced provides the foreground to many of Yosemite's most famous landmarks. From the river and its banks, views consist of Yosemite Falls, Bridalveil Fall, El Capitan, Half Dome, and other named and unnamed parts of the cliffs rimming the valley. Meandering through a sequence of compound oxbows, wetlands, and meadows, the river and its related features provide broadened panoramas. Throughout the valley, views from the river and its banks encompass the lower montane forest as it rises up to sheer rock faces of granite cliffs and talus slopes, with a flat valley bottom serving as a contrasting foreground. The juxtaposition of granite domes and waterfalls is unique, as is the concentration of river-related views found in Yosemite Valley.</p>	<p>Scenic and visual landscape elements would not be affected by the proposed actions.</p> <p>The final bridge design and culverts for code-compliant fire department access would be low profile, compatible with the surrounding cultural landscape, and would not be visible from the Merced River upon project completion.</p> <p>The utility crossing at Royal Arch Creek would not be visible upon project completion.</p> <p>Short-term visual impacts during installation of the bridge, culverts and utility crossing would be visible from the banks of the Merced River.</p>
<p>Recreational</p> <p>Premier outdoor recreation area in the world, picnicking, fishing, swimming, and river rafting</p>	<p>The valley's incredible setting, with striking cliffs and waterfalls towering above a meandering river and extensive moist meadows, provides the setting for a variety of active, creative, educational and interpretive, social, and reflective experiences. Every year millions of visitors from around the world come to Yosemite Valley to recreate in and along the Merced River. Well known and iconic features such as El Capitan, Yosemite Falls, and Half Dome provide a dramatic backdrop shaping the experience of first-time and return visitors alike. Visitors realize these experiences through a wide variety of activities occurring in and along the river. They include active pursuits such as hiking, biking, swimming, floating and water play, climbing, camping, or fishing; creative pursuits such as writing, painting, photography and other arts; and educational and interpretive pursuits. Social elements such as group camping and picnicking are integral to many activities, while others offer opportunities for solitude and reflection. Overall, the Yosemite Valley segment offers a variety of outstanding opportunities for frontcountry river recreation for people of all ages and abilities. The Merced in this segment allows people to immerse themselves in their surroundings, taking in the sights, sounds, and feel of the river and its dramatic backdrop. These experiences in turn relieve stress and promote connection to the natural world.</p>	<p>Recreational opportunities would not be diminished in the project area. The proposed plan would not change access to river resources, or the level of development, or visitor services in this river segment.</p>
<p>Fish and Wildlife</p> <p>Vegetation: state-listed rare species</p> <p>Wildlife: peregrine falcon</p>	<p>The large, moist, mid-elevation meadows and the associated riparian vegetation communities of Yosemite Valley owe their existence to the river processes, the high water table the river sustains, and its annual flooding. These mid-elevation meadows, most greater than 30 acres in size, and their associated riparian habitats and wildlife species are rare and unusual at a regional and national scale. The meadows and riparian habitats sustain harlequin ducks, bald eagles, black swifts, willow flycatchers, yellow warblers, western red bats, and Sierra Nevada mountain beaver, along with an exceptional diversity of both bat and sedge species. This biological diversity is a function of the variety of niches made possible by the meadows and presence of year-round water.</p>	<p>The project will not have a long-term impact on vegetation or wildlife communities, habitat, diversity, or the river process that species depend on. Project specific mitigation measures (see Appendix E, Mitigation Measures) would be implemented to minimize any impacts to wildlife or associated habitat during construction. There would be no impacts on fish.</p>

Section 7 Determination

The Ahwahnee Comprehensive Rehabilitation Plan includes three actions that are located on stream tributaries to the Merced River. Two of the proposed actions are associated with code-required fire department access to the cottages: a new vehicle rated bridge on an unnamed seasonal tributary and the upgrade or replacement of culverts on an unnamed seasonal tributary and Royal Arch Creek. The third action is the installation of a new utility corridor along an existing path from The Ahwahnee hotel to The Ahwahnee cottages that crosses Royal Arch Creek.

Using The Ahwahnee Comprehensive Rehabilitation Plan Environmental Assessment as the basis for the section 7 determination and implementing specific mitigation measures (e.g. performing construction at periods of low or no water, application of Best Management Practices, and seasonal species-specific restrictions for construction activities) outlined in Appendix E of the environmental assessment, the National Park Service has determined that the proposed projects will not invade the Wild and Scenic Merced River or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area as of the date of designation.

Recommended by Don L. Neubacher, Superintendent

Date

Approved by Chris Lehnertz, Regional Director

Date

THIS PAGE INTENTIONALLY LEFT BLANK

Appendix G: Impairment Determination

Definition of Impairment

Management Policies 2006, section 1.4.5, What Constitutes Impairment of Park Resources and Values, and section 1.4.6, What Constitutes Park Resources and Values provides the following explanation of impairment:

Impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. The need to analyze and disclose impairment impacts originates from the National Park Service Organic Act. The Organic Act established the National Park Service with a mandate “to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

An impact would be less likely to constitute impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values, and it cannot be further mitigated. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- *Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;*
- *Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park;*
- *Identified in the park’s General Management Plan or other relevant NPS planning documents as being of significance.*

Per NPS *Management Policies 2006, section 1.4.6*, park resources and values that may be impaired include:

- The park’s scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils, geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;
- Appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- The parks’ role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- Any additional attributes encompassed by the specific values and purposes for which the park was established.

According to guidance provided by the National Park Service Associate Director for National Resource Stewardship and Science in July 2010, impairment findings are not necessary for the following impact topics: visitor experience, socioeconomics, public health and safety, environmental justice, land use, park operations, etc., because they are generally not considered to be park resources or values according to the Organic Act. In addition, impairment is only evaluated for the preferred alternative.

Impairment Determination

The evaluation of impairment of park resources and values below was based on the type and intensity of impacts and the types of resources affected. Overall, beneficial impacts would not constitute impairment. With respect to the intensity of impacts, negligible and minor adverse impacts are not of sufficient magnitude to constitute impairment. Moderate and major adverse impacts may constitute impairment but do not automatically do so. Rather, these impacts must be analyzed with respect to the bulleted criteria above.

The following resources were evaluated for impairment on park resources and values resulting from implementation of the preferred alternative from The Ahwahnee Comprehensive Rehabilitation Plan:

- Geologic hazards
- Soils
- Hydrology
- Vegetation
- Wildlife
- Special status species
- Air quality
- Soundscapes
- Historic sites, buildings, and landscapes
- Archeological resources

Geologic Hazards

The project area is located in a geologically active area where natural forces continue to shape the landscape. Geologic hazards, such as earthquakes and rockfall, present potentially harmful conditions for people and facilities in the park. Rockfall would continue to pose a risk to the project area, as it does in many areas of Yosemite Valley. Seismic safety improvements proposed under the preferred alternative would address the minimum code required life-safety requirements of the 500-year (BSE-1) earthquake and 2500-year (BSE-2) earthquake. These actions would substantially decrease the risk to life and property at The Ahwahnee, resulting in a local, long-term, moderate, beneficial impact.

Implementation of the preferred alternative would not physically affect or result in changes that would impair geologic features. The parks geology would remain protected and available for enjoyment by park visitors.

Soils

Soils in the project area are classified as ‘resilient’ or ‘other’. Resilient soils are those capable of withstanding alteration and heavier use without permanent deformation, or that recover relatively easily from alteration and disturbance. Other soils are not considered highly valued or resilient, are generally more abundant, and are not likely to support plant communities that are rare or notably diverse. Soils in the project area have been previously disturbed through the construction of the hotel complex and ongoing operations. These soils would neither be considered key to the natural and cultural integrity of the park or opportunity for enjoyment of the park, nor have they been identified as a significant resource in the park. Implementation of the preferred alternative would not result in impairment to soils, because new disturbance to surface and near-surface soils would result in minor, adverse impacts.

Hydrology

The Merced Wild and Scenic River flows along the southeastern boundary of the project area, flowing east and then south as it passes The Ahwahnee cottages. Royal Arch Creek, a small seasonal tributary to the Merced River, flows north to south between the hotel and the cottages. In winter, spring, and early summer, the creek is fed by a combination of groundwater and snowmelt from the cliffs to the north of the project area. By late summer, Royal Arch Creek is dry. There is also a north-south unnamed seasonal tributary to the east of Royal Arch Creek that is fed by groundwater and snowmelt in winter, spring, and early summer, with little or no flow the rest of the year.

Excavation and construction activities to replace culverts and install a bridge at seasonal tributaries outside of the 100-year floodplain for the Merced River would result in adverse impacts associated with the temporary disruption of the surface flow and the increased potential soil erosion and sediment transport. In the long-term, there would be a minor to moderate beneficial impact on the unnamed seasonal tributary east of the cottages from removal of a low water vehicle crossing from the bed of the tributary.

Hydrologic features are one of the key natural resources for which the park was established. Because these resources, including floodplains, would not be affected beyond the current condition and there would be no change to the natural integrity of the park; the preferred alternative would not result in impairment to park hydrology.

Vegetation

Vegetation in the project area consists of native and ornamental species that have been manicured to emphasize the hotel as the visual focal point. Landscaping activities immediately surrounding the hotel and associated buildings include pruning, raking, removal of invasive non-native species, fertilizing, irrigating, and transplanting or seeding with native plants. Areas that are fertilized and irrigated include the main Ahwahnee lawn, the hotel entrance (flagpole area), the wedding lawn, The Ahwahnee cottage area, the Royal Arch Creek area between the swimming pool and the driveway over the creek, the ‘wildflower meadow’, and the dining room terrace.

Under the preferred alternative construction activities would result in local, short-term, minor, adverse impacts on the size and continuity of native plant communities. Implementation of best management practices during construction would minimize impacts on surrounding vegetation communities. The removal of select trees to meet fire code requirements along fire access roads

and the hardening of select pathways to meet accessibility requirements would result in local, long-term, minor, adverse impacts on the size and continuity of native plant communities in the project area.

Vegetation is a natural resource that contributes to the park purpose. Vegetation would not be affected beyond that current condition under the preferred alternative; there would be no change to the natural integrity of the park, or discernable effects that would impair park vegetation or opportunities for visitors to experience. The preferred alternative would not result in impairment of vegetation resources.

Wildlife

The park supports a diverse and abundant assemblage of wildlife. The project area is already highly disturbed from previous alterations to native habitat and normal hotel operations. With the implementation of mitigation measures for wildlife species (Appendix E), temporary noise and visual disturbance from construction activities would result in local, short-term, minor, adverse impacts. There would be a local, long-term, minor, adverse impact on upland habitat from removal of trees and some road widening for fire access road improvements. Implementation of mitigation measures with a focus upon avoidance, limiting construction activities during breeding seasons, or conducting detailed surveys immediately before construction, would minimize impacts on wildlife habitat and populations.

Wildlife is a natural resource that contributes to the park purpose. With implementation of the preferred alternative, wildlife in the project area would not be affected beyond the current condition; there would be no change to the natural integrity of the park, or discernable effect that would impair the park's wildlife for opportunities for visitors to experience it. The preferred alternative would not result in impairment of wildlife resources.

Special Status Species

Thirty-eight wildlife species currently have special status under either California or federal endangered species legislation, two of which are believed extirpated from the park. Many plants endemic to the Sierra Nevada are considered rare within the park and are given special protection. These species would be considered key to the natural integrity of the park and are considered significant by their rare nature.

The project would occur in suitable habitat and foraging areas for special status bird and bat species. The implementation of mitigation measures (Appendix E) with a focus upon avoidance, limiting construction activities during breeding seasons, limiting construction activities to daytime hours, conducting detailed surveys immediately before construction, and limiting areas of disturbance, would minimize impacts on these species. With mitigation, implementation of the preferred alternative would not impair special status species.

Air Quality

There are many sources of air pollutants in the park that affect the project area, including sources outside of the park (primarily from the Central Valley) and in-park sources, such as vehicle emissions and campfires.

There are currently no known sources of emissions from the project area; the preferred alternative would result in very localized, short-term, negligible to minor, increases in pollutants from dust

and vehicle emissions. Due to the short-term and minor nature of these impacts, implementation of the preferred alternative would not impair air quality.

Implementation of the preferred alternative would result in short-term, minor, adverse impacts on local air quality due to construction-related dust, equipment and vehicle emissions. Existing heating and cooling systems would be upgraded or replaced with more efficient models, mechanical ventilation would be provided throughout the hotel and cottages, and low-emission finish materials would be used where possible. This would result in a long-term, minor, beneficial impact on indoor, local, and regional air quality.

Because this resource, which contribute to the park's purpose, would not be affected beyond the current condition and there would not be any change in the natural or cultural integrity of the park, the preferred alternative would not impair park air quality or opportunities for visitors to experience it.

Soundscapes

Protecting natural sounds is important both to the visitor experience and the ecological integrity of natural resources in the park. Natural sounds, such as wildlife, wind in the trees, and running water, are all present in the project area. Activities associated with regular operations at The Ahwahnee site also affect ambient sound in the vicinity of the project area. These noises include human voices and vehicle noise. The type of noise generated during implementation of the preferred alternative would include the operation of heavy equipment, voices of workers, handheld manual and power tools (e.g., hammers, drills, and saws), and noise associated with heavy vehicles. The increased noise levels would be short-term; no long-term increase in noise would result from the preferred alternative. Due to the short-term and minor nature of these impacts, implementation of the preferred alternative would not result in impairment of natural soundscapes.

Historic Sites, Buildings, and Cultural Landscapes

The Ahwahnee is located on a 35-acre site near the east end of Yosemite Valley at the base of the Royal Arches formation, north of the Merced River. The Ahwahnee was originally listed on the National Register of Historic Places (NRHP) in 1977 and was designated a National Historic Landmark in 1987. It was also listed as a Developed Area within the Yosemite Valley Historic District in 2006.

Completed in 1927 and designed by architect Gilbert Stanley Underwood, The Ahwahnee is still considered the greatest of the national park lodges. Architecturally, it is a symbol of design excellence, 1920s architectural ideals, and Rustic style architecture on a previously unimagined scale. Historically, The Ahwahnee is significant for its role in the development of tourism, national parks, and the concessions industry and for American citizens' then-emerging appreciation of the National Park System and the great outdoors.

Facilities at The Ahwahnee are not fully compliant with current fire protection and building codes, recommended seismic safety practices, and accessibility codes and guidelines. Many of the electrical, plumbing, and mechanical systems are aging and need to be replaced and updated. In addition, some historic hotel finishes and landscape components have deteriorated or been altered over the years, potentially affecting the historic integrity of this National Historic Landmark.

The preferred alternative provides for fire/life-safety, seismic, accessibility, and building code compliance; maximizes space efficiency; and enhances visitor experience and the quality of life for employees by using minimally invasive techniques. The preferred alternative also provides for historic preservation measures and rehabilitation actions for a variety of historic spaces and features of the historic property.

Alternative 3 would result in an adverse effect on the National Historic Landmark from actions that would bring the hotel into compliance with current fire/life-safety, accessibility, and seismic codes and standards. In recognition of the potential for adverse effects to the historic property, the National Park Service and the California State Historic Preservation Officer developed a Programmatic Agreement in January 2011 in accordance with 36 CFR Part 800.14(b). The 2011 Programmatic Agreement documents the terms and conditions agreed upon during consultation to resolve the adverse effects of the proposed action.

With implementation of the 2011 Programmatic Agreement to resolve adverse effects, there would not be any change in the overall cultural integrity of the park. Therefore, the preferred alternative would not impair park historic buildings, sites, or landscapes, or opportunities for visitors to experience them.

Archeological Resources

Archeological resources are considered key to the cultural integrity of Yosemite National Park. Yosemite Valley includes over 100 archeological sites that evidence thousands of years of human occupation. Ground disturbing activities under the preferred alternative would have the potential to affect these sites, but with mitigation stipulated in the 2011 Programmatic Agreement, including fencing off the site, briefing of project personnel, and the presence of an American Indian monitor, would resolve the potential adverse effect to archeological sites. Therefore, implementation of the preferred alternative would not impair archeological resources.



Yosemite National Park
P.O. Box 577
Yosemite, CA 95389

www.nps.gov/yose/

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public land and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is on the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

