



Desert View Inter-tribal Cultural Heritage Site Plan / Environmental Assessment



PUBLIC COMMENT

The public comment period for this Environmental Assessment will extend through November 24, 2018. We encourage you to review the document and welcome your comments. During the comment period, you may submit comments online, through the regular mail, or by hand delivery:

Submit Comments via the Project Website: The most efficient way for the National Park Service to process comments is to receive them through the NPS Planning, Environment, and Public Comment (PEPC) project website (<https://parkplanning.nps.gov/DesertViewICHs>). At the project website, you will find the full text document, an on-line comment form, and instructions for submitting online comments.

Submit Comments by Mail or Hand Delivery: Comments may also be sent directly to: Superintendent, Grand Canyon National Park, Attn: Desert View EA, P.O. Box 129, Grand Canyon, AZ 86023.

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment, including your personal identifying information, may be made publically available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so. Comments will not be accepted by fax, email, or in any other way than those specified above. Bulk comments in any format (hard copy or electronic) submitted on behalf of others will not be accepted.

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Chapter 1 - Introduction

PROPOSED ACTION

The National Park Service (NPS) is proposing to transform Desert View, a developed site along the South Rim of Grand Canyon National Park (GCNP) from a scenic overlook and visitor services area into an Inter-tribal Cultural Heritage Site. Through strategic and conceptual planning and continued consultation with members of the traditionally associated American Indian tribes of Grand Canyon, the NPS has developed a proposal and related site plan to modify and improve existing park infrastructure in order to enhance and expand cultural and educational programs and demonstrations, host special events and exhibits, and ensure the opportunity exists for park visitors to interact with and learn directly from tribal representatives and artisans through first-voice interpretation.¹

PURPOSE AND NEED

The purpose of this project is to increase opportunities for authentic first-voice interpretation, improve visitor orientation, and enhance the overall visitor experience by transforming Desert View from a scenic overlook and visitor services area into an Inter-tribal Cultural Heritage Site.

Specifically, action is needed at this time to:

- Embrace the unique opportunity to partner with tribes;
- Address visitor orientation issues at Desert View related to only partial implementation of a 2002 plan for the site; and
- Proactively respond to increasing visitation and subsequent resource impacts at the site.

PROJECT OBJECTIVES

First-Voice Interpretation

- Promote knowledge of and appreciation for the diverse cultures of tribes associated with the Grand Canyon within all available activities at Desert View.
- Integrate first-voice tribal voices, history, and cultural perspectives into park interpretive programs.
- Increase the number and broaden the variety of cultural and educational programs, demonstrations, and special events and exhibits, and increase opportunities for personal interactions with tribal representatives.
- Provide opportunities for associated tribes to share information related to tourism on tribal lands with visitors to Desert View in order to encourage further exploration of cultures beyond the boundaries of GCNP.²

Visitor Orientation

- Provide visitors, upon arrival, with clear visual orientation to the site, including an understanding of the significance of Desert View and the Grand Canyon.

¹ *First-voice Interpretation* combines the concepts of a *first-person* narrative with traditional interpretation and education services. At Desert View, this specifically means that through demonstrations of arts and crafts, exhibits, and other special programs, American Indian demonstrators provide their own perspectives and narratives of their culture and history directly to park visitors in the first person.

² This proposed action also provides the NPS with the opportunity to implement the Native American Tourism and Improving Visitor Experience (NATIVE) Act, which was signed into law in 2016. The purpose of the NATIVE Act is “to enhance and integrate Native American tourism, empower Native American communities, increase coordination and collaboration between Federal tourism assets, and expand heritage and cultural tourism opportunities in the United States” (PL 114-221).

Infrastructure

- Appropriately scale the modern built environment to align with operational needs, allowing for the greatest flexibility to address anticipated programming.
- Give visual and architectural deference to the Desert View Watchtower National Historic Landmark, Desert View Watchtower Historic District, and its associated cultural resources in all design features at Desert View.
- Improve site accessibility, including to the main Desert View Watchtower entrance.
- Expand and/or improve visitor facilities and associated infrastructure to accommodate a projected increase in visitation.
- Improve the environmental sustainability of site infrastructure, including any new facilities and associated infrastructure and operations.

BACKGROUND

Located at the southeast boundary of GCNP, Desert View functions as the east entrance to the park and provides many visitors with their first introduction to some of the park's most important resources including the Desert View Watchtower (Watchtower) (a National Historic Landmark) and the surrounding historic district, as well as spectacular views of the Painted Desert and the Little Colorado River Gorge. The area also serves as the first stop for information, restrooms, water, food, fuel, and souvenirs to visitors entering the park from the east along Arizona State Route 64 and provides convenient access to some of the park's neighboring tribal lands.

In 2002, the NPS completed a plan and associated environmental assessment related to transportation infrastructure at Desert View. While many of the infrastructure changes were made, the concept of Desert View operating as a transportation hub was never fully implemented, leaving the initial orientation to Desert View confusing for the majority of visitors who come to the site in their personal vehicles. For example, in moving the parking lot farther south, the NPS created a visual barrier between arriving visitors and the canyon rim and the Watchtower. These infrastructure changes also included the adaptive reuse of former administrative buildings located at the very entrance of Desert View. While the NPS used one of these buildings as a visitor center for a number of years, the building was closed when the NPS assumed management of the Watchtower in 2015. Visitor services and the Grand Canyon Association (GCA) bookstore were moved into the Watchtower at that time.

In 2013, GCNP established an Inter-tribal Working Group (ITWG) comprised of NPS staff, non-profit partners, and representatives from each of the park's 11 traditionally associated American Indian tribes. Traditionally associated tribes are tribes who regard park resources as essential to their development and continued identity as a culturally distinct people, have an association with the park that has endured for at least two generations, and that the association began prior to the establishment of the park. The Havasupai, Hopi, Hualapai, Kaibab Band of Paiute Indians, Las Vegas Tribe of Paiute Indians, Moapa Band of Paiute Indians, Navajo Nation, Paiute Indian Tribe of Utah, Pueblo of Zuni, San Juan Southern Paiute, and the Yavapai-Apache Nation are the traditionally associated tribes of Grand Canyon.

The purpose of the ITWG is to provide a venue where tribal representatives can work collaboratively with GCNP staff on topics of mutual interest. In 2015, the group agreed to focus its efforts on the Desert View area and work toward creating and sustaining educational programs that celebrate the diversity and tribal histories of the region benefiting both the tribes and park visitors. Since this time, the ITWG vision has been instrumental in helping park staff integrate authentic cultural voices into the interpretive programming offered at Desert View.

The ITWG embarked on a strategic planning effort in 2015 that outlined the collaborative vision between GCNP and tribal partners to integrate tribal voices, history, and cultural perspectives into park interpretive programs. This strategic plan focused on four key areas that would make up the foundation of a tribal presence at Desert View, both in the programming offered at the site, as well as to act as a guide for how the tribes are represented visually on the landscape.

These four focus areas would:

- 1) Build a foundation of sustainability, so that tribal input for cultural programming is a permanent feature of park operations and programming at Desert View;
- 2) Provide first-voice interpretation as a service to park visitors through the cultural demonstration and education programs, while hosting a range of representatives from each of the associated tribes;
- 3) Create new and expand existing employment and internship opportunities for tribal youth; and
- 4) Establish culturally appropriate programs by requesting that each of the tribes provide GCNP with a suitable demonstration program protocol – ensuring the respectful sharing of culture among the individual cultural groups.

Collectively, these four areas meet the overall objectives of the strategic plan, informing, educating, and assisting the visiting public in understanding the tribe's perspective of the Grand Canyon. This perspective is embedded in the ITWG mission statement for Desert View: *"We share Desert View as a symbol to bond the peoples of yesterday, today, and tomorrow. The Watchtower serves as a connection to embrace the heartbeats of our peoples and visitors far and wide with the heartbeat of the canyon . . . We are still here."*

The NPS embraced the tribes' vision and developed a cultural demonstration program hosted at the Desert View Watchtower. To date, over one hundred different demonstrators have provided programs at Desert View, with demonstrations occurring on 175 days of the year in 2017. Demonstrators have represented each of the 11 tribes, providing a wide range of programs. Silversmithing, carving, pottery, basket weaving, rug weaving, beading, storytelling, food heritage, dancing, and traditional music make up just some of cultural representations available for visitors to learn from.

The park also incorporated Ancestral Lands Conservation Corps (ALCC) crew and internship opportunities into summer programs. Through the ALCC, students from the associated tribes participate in field crews for 12-week sessions, learning a range of skills such as trail-building and masonry, which are essential to the management of national parks. The ALCC interns gain skills around public speaking and other outreach, providing first-person perspectives of their culture to visitors while delivering interpretive programs.

Building on the successes of each of these programs, GCNP then prepared a Site Concept Plan for Desert View in 2016 that identified potential on-site improvements and modifications to facilities. This Plan/EA expands upon the Site Concept Plan to further refine the proposed action for its ability to meet the purpose, need, and objectives for action and evaluate the potential impacts to park resources.

In the time that the NPS and ITWG have re-envisioned visitor services at Desert View, visitation at this location has increased substantially. Whereas visitation to the Desert View Watchtower was 573,000 in 2015, only two years later, visitation had grown to approximately 675,000 visitors, an 18% increase. (B. Gatlin, personal communication, February 28, 2018). Visitor estimates at the east entrance of the park show a similar trend. In 2015, approximately 742,000 visitors entered the park at the east entrance, near Desert View; whereas in 2017, approximately 871,000 visitors entered the park at this location, a 17% increase (NPS n.d.). This increased use is placing a higher demand on existing infrastructure and is having observable impacts on resources.

ISSUES AND IMPACT TOPICS

Impact Topics Retained for Further Analysis

Some issues were identified as requiring further analysis in this Plan/EA. These issues, presented below, form the basis for the affected environment and impact topics analyzed in *Chapter 3: Affected Environment and Environmental Consequences*.

- Visitor Use and Experience – Interpretive and Educational Opportunities
- Cultural Resources – Desert View Watchtower National Historic Landmark, Desert View Watchtower Historic District, and other cultural resources

Impact Topics Dismissed from Detailed Analysis

Acoustic Environment/Soundscapes

The project area for the proposed action is within a developed area that experiences some of the highest and most dense visitation within the park and includes high intensity uses, including a highway, parking lots, a telecommunications tower, and an administrative and residential area. While sound levels likely vary throughout the 113 acre site depending on level of visitation and specific use, the NPS estimates that ambient sound levels at Desert View are comparable to a typical residential area and likely range between 40 dBA (comparable to the sound levels in a library) and 70 dBA (comparable to the sound levels generated by a washing machine) through the day and year.

While there is nothing in the proposed action that would increase ambient sound levels in perpetuity, construction and maintenance activities would be intermittently present over the course of one to five years as various aspects of the proposed action would be implemented. Considering the use of heavy equipment on-site, sounds generated by construction could run as high as 100 dBA during the day (within 50 feet of the operating equipment), when sounds on-site are generally expected to be in the 70 dBA range. Typically, an increase of 3 dBA is perceived by humans as twice as loud. The United States Department of Labor Occupational Safety and Health Administration allows only two hours of daily exposure to 100 dBA (CFR 1926.52). These sounds would certainly be perceivable by visitors and wildlife but are also expected to attenuate quickly over the landscape, would be site-specific, and would immediately dissipate upon termination of use of the heavy equipment. Best management practices for noise mitigation would also be followed (such as ensuring that motorized vehicles and equipment have properly functioning mufflers and construction equipment and other motor vehicles do not idle longer than is necessary), and there would be no long-term (i.e., in perpetuity) impacts from implementation of the action alternative. Considering existing use and sound levels at Desert View and the temporary, short-term (i.e., intermittent and for no more than five years) nature of these impacts, this impact topic has been dismissed from further analysis.

Cultural Resources – Archaeological

The entire project area has been previously surveyed for archaeological resources (GCNP 2018), and while there are several known sites within the project area, no action is proposed that would disturb or impact these sites. In addition, mitigations have been identified to protect any previously undiscovered archeological resources and ensure they are not impacted, neither by construction and overall implementation of the action alternative, nor by long-term siting of features. For these reasons, this impact topic has been dismissed from further analysis.

Cultural Resources – Ethnographic

The Grand Canyon has long been of importance to native cultures and it figures prominently in the origins, religious beliefs, and ceremonial practices of many tribal groups. For example, both the Navajo and Hopi were known to use the Desert View Point area in historic times, prior to the construction of the Watchtower (NPS 2002). However, despite extensive involvement from tribes in compiling ethnographic reports for the park and their extensive involvement in the planning for this proposed action, no ethnographic resources have been identified within the area proposed for development (for example, some ethnographic resources have been identified *near* but not *within* the project area); therefore, this resource has been dismissed from

further analysis in the EA. That said, copies of this Plan/EA will be shared to each traditionally associated tribe for review and comment. If ethnographic resources within the project area are identified in the future, appropriate mitigation measures would be undertaken in consultation with the tribes to avoid adverse impacts to the identified resources. The location of any ethnographic sites would not be made public.

Environmental Justice

Cameron and other communities near the park, including those on surrounding tribal lands, contain both minority and low income populations; however, environmental justice was dismissed as an impact topic in this EA because the action alternatives would not have disproportionately high health or environmental effects on these populations or communities. Desert View would remain available for use by all people regardless of race or income, and any construction workforces would not be hired based on race or income. Notably, cultural demonstrators would need to be of tribal descent, but this opportunity would slightly increase *socioeconomic* opportunities and would not adversely affect the *health or environment* of tribal populations (see paragraph on socioeconomics below). Furthermore, the park staff and planning team actively solicited public participation as part of the planning process and gave equal consideration to all input from persons regardless of age, race, income status, or other socioeconomic or demographic factors. For these reasons, environmental justice was dismissed as an impact topic in this EA.

Human Health and Safety

During the planning process, two safety concerns were raised and have been addressed: traffic patterns within the parking lot and use of flagstone along trails. Although reconfiguration of the parking areas may increase the potential for conflict between recreational vehicles (RVs) and personal operated vehicles (POVs), the proposed improvements improve vehicular circulation overall. A civil engineer designed the parking lot improvements and anticipates no health or safety risks associated with the proposed changes. The NPS has also experienced safety issues related to the use of flagstone along trails, particularly when the NPS is unable to maintain these surfaces properly. For this reason, flagstone has only been included as an accent, when necessary for developing character and a sense of place (in areas with low foot traffic and/or are otherwise avoidable) or in locations where the flagstone was historically located (such as at the entrance to the Watchtower). If appropriately installed and maintained, this surface should provide no safety risks to visitors.

Indian Trust Resources and Indian Sacred Sites

No Indian trust resources are in the park. There are no documented sacred sites in the project area and tribal access would be maintained throughout the project duration unless there were site-specific construction-related safety concerns. If any sacred sites are identified during the project, tribal consultation would occur to avoid them. Therefore, Indian trust resources and Indian sacred sites were dismissed as impact topics.

Socioeconomics - Minority and Low Income Populations

Although the action alternatives could lead to increased employment for American Indians and increased incomes of cultural demonstrators through direct sales and indirectly through increased tourism on surrounding tribal lands, all of these impacts are beneficial and were therefore dismissed from further analysis in this EA.

Vegetation and Soils

The NPS anticipates disturbance to and/or removal of vegetation within the juniper/pinyon pine habitat at Desert View, both during construction and in the long-term to accommodate new facilities in the project area. For example, vegetation and soils along existing paved trails may be disturbed or trampled during construction to accommodate larger vehicle access across the site, small-scale staging, and activities such as the replacement or installation of utilities. To accommodate for this access and use, the action alternative would disturb up to 0.5 acres of vegetation and soils within the visitor use area at Desert View (low density of trees) and up to 2.5 acres of existing vegetation and soils within NPS administrative use areas at Desert View, including the wastewater treatment plant, the area around the water tanks, and the administrative and residential area (higher density of trees). The NPS estimates that up to 12 pinyon pine or juniper trees within the visitor services area could be removed and up to an additional 100 trees could be removed to accommodate potential expansions in housing, water storage, and at the wastewater treatment plant.

Because the visitor services area already has a low density of trees, removal of up to 12 trees would remove approximately 3-4% of the trees across the 30 acre visitor use area.

In the long term, much of these disturbance corridors would be revegetated and additional areas would be restored (i.e., pavement removed and area replanted) where visitor facilities are no longer necessary. Approximately one half of the disturbed footprint in the NPS administrative use areas would be revegetated (1.25 acres), and approximately 1.5 acres would be revegetated in the visitor services area where vegetation is currently less dense and more disturbed. See Table 1.1 below.

TABLE 1.1: ESTIMATED DISTURBANCE AND REVEGETATION ACREAGE AT DESERT VIEW

	TOTAL DISTURBANCE	TOTAL REVEGETATED	NET CHANGE
Site Improvements for Visitors	0.5 acres	1.5 acres	+1.0 acre
Site Improvements for Administration	2.5 acres	1.25 acres	-1.25 acres
TOTAL	3 acres	2.75 acres	-0.25 acres

Because soils are so shallow in the area, some top soil would likely be imported to areas where pavement is being permanently removed to create an adequate base for revegetation efforts. However, the NPS does not anticipate a high need for grading, and there would be little disturbance of the native soil profile or removal of the native soil nutrient layer.

Considering a net loss of approximately a quarter acre of vegetation across this 113-acre site, the low level of disturbance to native soils from the preferred alternative, and the considerable level of existing disturbance at Desert View, vegetation and soils have been dismissed from further analysis. Due to previous modifications at Desert View and high levels of visitor use, the soils and vegetative community have been largely disturbed and modified overtime, particularly around existing development. Therefore, removing up to three acres of vegetation on-site (all in close proximity to or within existing disturbed areas) would not change the character or density of vegetation in the area, and, in fact, revegetation of over 1.5 acres of current disturbed areas would help restore vegetation and soil communities in areas of the site that are the most heavily denuded.

Wildlife

Dominated by pinyon-juniper woodland, the Desert View area is home to a wide variety of wildlife species. Ranging from common birds such as raven and pinyon jay, to large ungulates like mule deer and elk, wildlife populations at Desert View are similar to the South Rim Village and the rest of South Rim of the Grand Canyon.

The proposed action within this Plan/EA would remove approximately three acres of juniper/pinyon pine habitat across the site. For context, this acreage represents less than 3% of the total acreage across the visitor use and administrative areas of Desert View (which includes paved and non-paved areas) and is therefore not expected to reduce wildlife access to suitable habitat.

Considering little anticipated impacts to habitat, the primary potential impacts to wildlife would occur during on-site construction due to noise generated by the use of machinery. Although the developed area considered in this plan for construction is a location where people are present and where sounds generated by intermittent, short-term (i.e., less than five years) construction and maintenance activities would not appreciably affect the natural soundscape, sounds from light and heavy equipment could disturb individual animals if present in or near the project area when work is being completed. For this reason, best management practices (BMPs) have been identified for noise mitigation (such as ensuring that motorized vehicles and equipment have properly functioning mufflers and construction equipment and other motor vehicles do not idle longer than is necessary) to reduce the duration and noises associated with the use of heavy equipment and therefore reduce duration and intensity of impacts to all wildlife.

As these impacts from noise associated with construction are site-specific, intermittent, expected to attenuate quickly, are directly related to the use of machinery and would occur only during daylight hours, and are within an already high visitor use area (ambient noise levels are elevated), this topic has been dismissed from further analysis. Wildlife who are sensitive to these noises likely avoid the area currently, and those present and impacted by construction noise (i.e., foraging behavior disrupted) have ready access to similar, if not a higher quality, of habitat. See section on soundscapes above.

Wildlife Species of Special Concern

California Condor

The California condor (*Gymnogyps californianus*) may occur in the project area. However, despite regular surveys, the NPS has no record of condors nesting within 10 miles of Desert View as of August 2018. There is no critical habitat for the California condor within the project area. Potential direct and indirect effects on California condors, if present, include disturbance from construction noise and attraction to investigate the project activities. Noise disturbance could flush birds from perching, roosting, or scavenging sites. Currently, no condors are nesting within 10 miles of the project site. If this were to change and condors were found to be nesting within 0.5 miles of the site, construction would be restricted to the non-breeding season. Similarly, mitigations have been identified to completely avoid impacts to condors should individuals be found near the project area during construction. As a result, the NPS does not anticipate impacts to foraging or reproductive behaviors of condors. Although these birds are typically curious, there is already such high visitor use and development on-site that construction work is not expected to increase their interest in the site. For these reasons, impacts to the California condor has been dismissed from further analysis.

Mexican Spotted Owl

Mexican spotted owl (*Strix occidentalis lucida*) (MSO) may occur in the project area as there is a Mexican spotted owl Protected Activity Center (PAC) (of 54 total in the park) within approximately 0.5 miles of the project area. However, despite regular surveys, nest and roost areas within this PAC have never been located and only a single MSO was heard within this PAC in 2018 (D. Espericueta, personal communication, September 4, 2018). The average size of a PAC is 988 acres; all PACs in GCNP are found below the rim in side canyons. There is no critical habitat for Mexican spotted owl within the project area. Potential direct and indirect effects of the project actions on Mexican spotted owls include noise disturbance, which may have some negative impacts on nesting and roosting individuals. Currently, no MSO individuals, roosts, or nests, have been detected within 0.5 miles of the project area. Should surveys indicate otherwise, mitigations have also been identified to avoid any potential impacts to MSO, such as timing restrictions to prevent construction during the nesting season. The NPS does not anticipate impacts to foraging individuals as all construction activities would occur during daylight hours when owls are not typically active. Although there is the potential for effect due to the proximity of a PAC, the NPS does not anticipate any impacts to MSO from the proposed action. This topic has therefore been dismissed from further analysis.

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Chapter 2 - Alternatives

ALTERNATIVES

Alternative A – No-Action Alternative

Under Alternative A, the NPS would continue to provide the services presently offered within the existing infrastructure at Desert View as long as contracts and agreements with concessioners and partners remain in place. These services include a campground; gas/service station (building #1112); general store with deli (building #1388); trading post with coffee and ice cream shop (building #1168, also known as the Fred Harvey Deli); a bookstore, information desk, and frequent cultural demonstrations in the Watchtower; and interpretive programming primarily at the amphitheater. See Figure 2.1 on page 10 for a map of existing conditions. (This figure is also useful for place names and navigating the proposed actions within the preferred alternative.)

While cultural demonstrations would continue at current levels, no additional space for the demonstrations or other program support (such as prep areas) would be developed, and no action would be taken to change the entrance and initial orientation to the site. The former visitor center (building #915, also known as the Indian Employee Quarters), which is located at the forefront of the visitor parking lots, would likely remain closed to the public and used for administrative purposes and storage. The Old Bookstore (building #41)—which is configured into four rooms: a bathroom, kitchen, sitting area, and front room—would also continue to be used by GCA staff as a break room, and the Search and Rescue/Fire Cache (building #83, also known as the NPS Residence) would continue to be used as a storage building. Other facilities and infrastructure (such as utilities and housing) would remain at existing capacities.

Alternative B – Preferred Alternative and NPS Proposed Action

Under Alternative B, the NPS would partner with associated tribes and park partners to transform Desert View from a scenic overlook and visitor services area into an Inter-tribal Cultural Heritage Site.

All services currently offered at Desert View would continue as long as contracts and agreements with concessioners and partners remain in place (see Alternative A), but opportunities would be increased for first-voice tribal interpretation, improved visitor orientation, and enhanced visitor experience. The NPS would expand opportunities for cultural and educational programs including demonstrations, exhibits, and personal interactions with tribal representatives and artisans. In support of these programs, the NPS would modify existing infrastructure (including the adaptive reuse of historic buildings) and complete some new construction within the existing developed footprint at Desert View. These site modifications, which are shown in Figure 2.2 on page 11, would include the following. (Please note: it may also be helpful to refer to Figure 2.1 on page 10 for place names and navigating the proposed actions within this alternative.)

TRANSPORTATION	
<i>Parking Lots</i>	The existing parking lots would be restriped and islands reconfigured to accommodate passenger vehicle parking in both the east and west parking lots. RV and commercial bus parking would be relocated to the east parking lot, south of passenger vehicle parking. This would place RV and bus parking closer to the bus turn-around area and away from increased pedestrian traffic in the primary parking areas.
<i>Bus Stop</i>	An additional bus stop for passenger drop-off/pick-up would be located just a few hundred feet south of the existing stop. This stop would include a developed sidewalk (approximately 90 ft long) for dropping off visitors, an access trail (no more than 100 ft long), a few benches, and an orientation sign.
<i>Traffic Flow</i>	Traffic flow and turn lanes would be reconfigured to create a “T” intersection near the main parking lots (i.e., passenger and/or RV and bus parking spaces), allowing entry into both the east and west parking lots. A portion of road north of the “T” intersection would be removed.

FIGURE 2.1: EXISTING SITE PLAN – NO-ACTION ALTERNATIVE

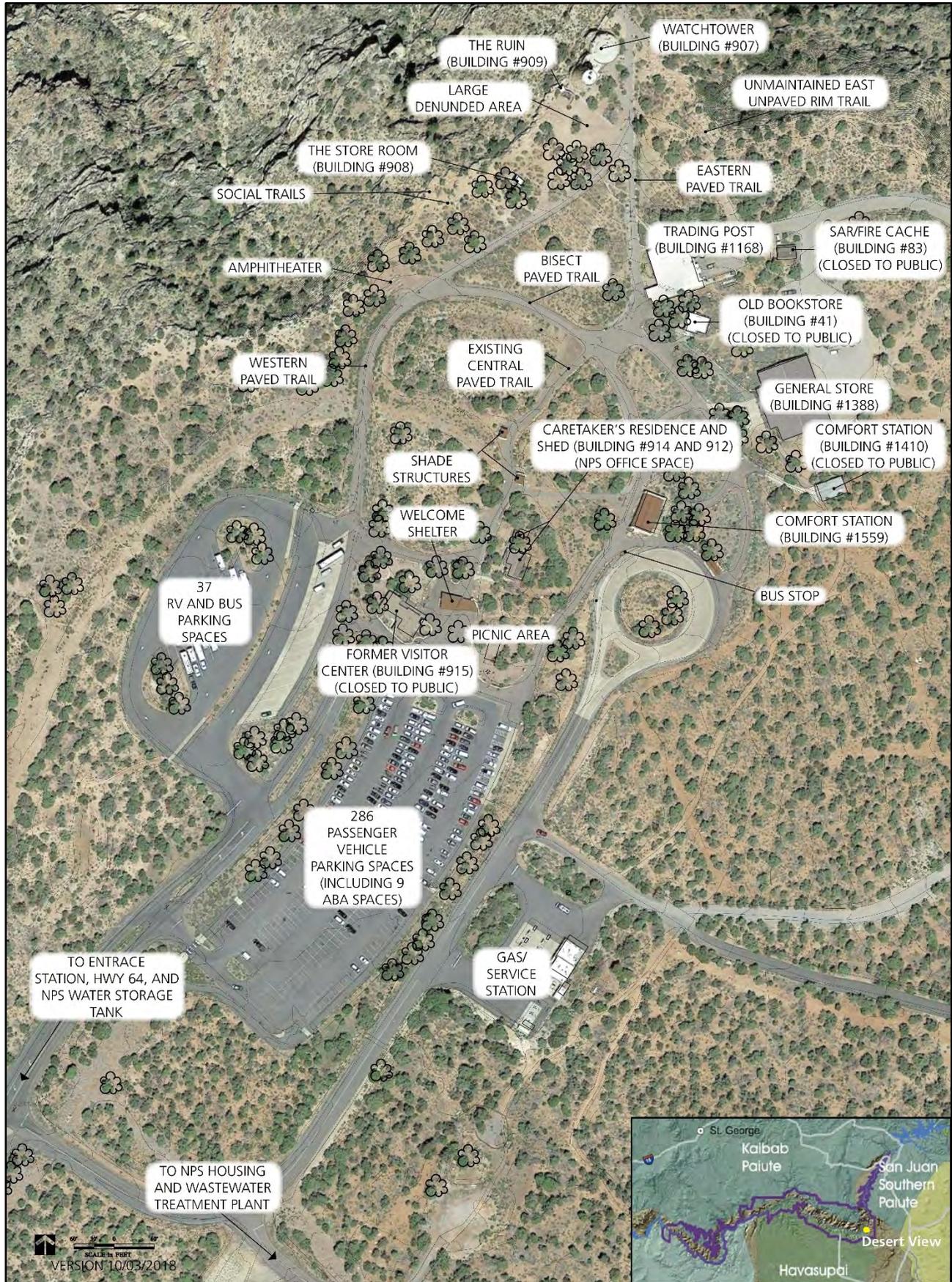
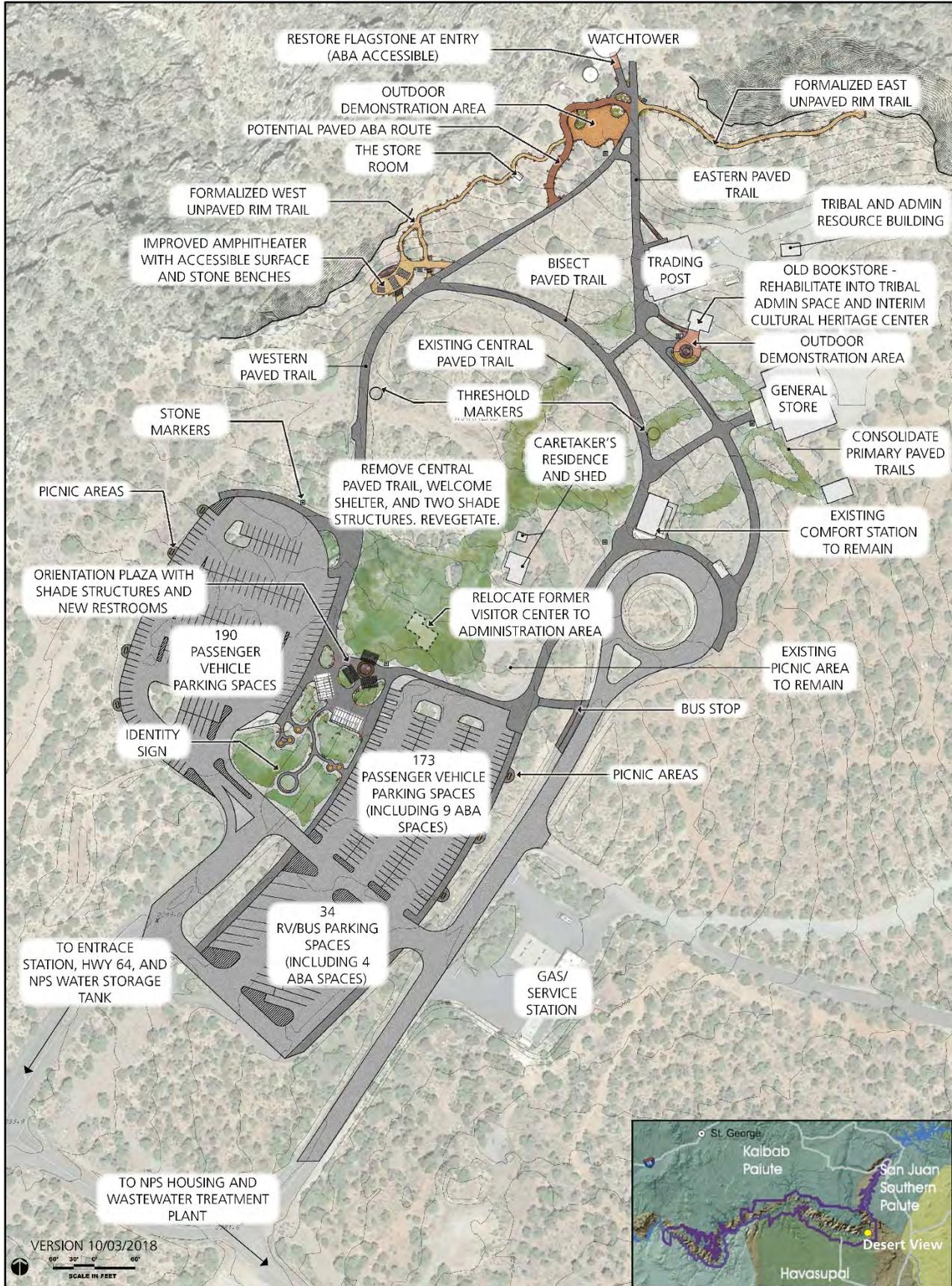


FIGURE 2.2: PROPOSED SITE PLAN FOR VISITOR SERVICES AREA – PREFERRED ALTERNATIVE AND NPS PROPOSED ACTION



TRANSPORTATION (continued)

<i>Traffic Flow (continued)</i>	A new, 40 ft, intersection would be constructed between the east parking lot and the gas/service station (building #1112), enabling traffic to flow from the new shuttle stop to the bus parking area, while allowing for continued separation of POV and RV/bus users. This reconfiguration would allow for ease of access from all three points of entry to the Desert View site (the two parking areas and bus drop off) and would reduce noise levels from idling buses near pedestrian entrances to the Desert View visitor use area.
<i>Developed Footprint</i>	Except for the short connection between the east parking lot and service station (building #1112), these modifications would all occur within the existing developed footprint of the existing parking lots and would result in a net loss of pavement due to the removal of a portion of the road north of the proposed “T” intersection.

TRAILS AND SITE CIRCULATION

<i>Central Paved Trail</i>	The existing central paved trail that extends from the parking lots north toward the Trading Post (building #1168), the Welcome Shelter (a steel-covered, stone and wood entry plaza with benches), and the two shade structures along the central paved trail would be removed, and the area, including the location of the former visitor center (building #915) and neighboring paved plaza, would be restored and revegetated by having the pavement removed and the area graded. As needed, pedestrian barriers, such as weathering steel posts with chains, would separate trails from newly revegetated areas until vegetation has been successfully reestablished. The eastern, western, and bisect paved trails would be retained to provide a circular and more simplified trail system around the site. Minor paved trails would be retained and/or reconfigured as needed to provide access to the Caretaker’s Residence (building #914, also known as the Fred Harvey Caretaker's Residence), which is used for NPS offices. In general, primary trails would be consolidated, where feasible, and realigned as needed to meet accessibility guidelines. While the precise alignments of these minor paved trails would be determined by the final designs for the cultural demonstration space near the Old Bookstore (building #41, also known as the Comfort Station/Visitor Contact Station), the consolidations and alignments shown in Figure 2.2 on page 11 have been used to inform the impact analysis in this Plan/EA. While some flagstone surfacing could be used in key locations as accents for a visual connection to the historic buildings, its use would be minimized to ensure safety and minimize future maintenance along the trails.
<i>Eastern and Western Paved Trails</i>	The eastern and western paved trails that lead to the Watchtower (particularly as they approach the Watchtower) may be steeper than Architectural Barriers Act (ABA) guidance recommends (less than 5%). The gradient of these paved trails would be verified through a topographic survey. Should the grade(s) be non-compliant, the NPS would consider several options for providing accessible routes to and from the Watchtower, including: constructing parallel ABA compliant trails to reach the Watchtower, reestablishing a central trail between the bisect paved trail north to the Watchtower (this would follow a similar alignment as the trail that existed in 1941, as shown on page 45, and is north of the existing central paved trail), or realigning sections of the existing eastern and western paved trails to correct the grade. An example parallel, ABA compliant trail is shown on Figure 2.2 (page 11) to the west of the Watchtower, along a portion of the west unpaved rim trail and along the proposed outdoor cultural demonstration space near the Watchtower. A similar, secondary, ABA compliant paved trail could be constructed between the Watchtower and the Trading Post (building #1168). Combined, these two additional paved trails could be up to 500 ft long and eight ft wide (actual alignments to be determined). Regardless of precise location, these ABA trails would be paved. The final alignments would be selected based on feasibility and minimizing impacts to cultural resources.

TRAILS AND SITE CIRCULATION (continued)

<i>East and West Unpaved Rim Trails</i>	An existing trail along the rim and east of the Watchtower, which was constructed by Civilian Conservation Corps between 1933 and 1934 (known as the east unpaved rim trail), would be improved and trail signs added. To the west, a series of social trails connecting the amphitheater to the Watchtower, would be formalized into a single unpaved trail (known as the west unpaved rim trail). These two unpaved trails would be slightly widened, lined with native stone, and surface leveled, with substantial trip hazards removed. The NPS would specifically rehabilitate the stone lining and drainage features of the east rim unpaved trail. Each trail would extend approximately 400 ft. Additional stone seating could be installed at the end of the east unpaved rim trail.
<i>Entrance to Watchtower</i>	The entrance to the Watchtower would also be restored to flagstone, as it was originally designed. The Watchtower’s historic flagstone entrance would be rehabilitated: the asphalt covering the flagstone would be removed, the flagstone would be repaired, and flagstone added where it was missing.
<i>Signage</i>	<p>Two stone threshold interpretive markers would also be installed at key locations along the eastern and western pedestrian paved trails approaching the canyon rim (one to the west before the amphitheater and one to the east before the Old Bookstore (building #41)). These locations align with the former visitor use parking lot (pre-2004) and represent where visitors would have historically entered the site prior to NPS modifications between 2002 and 2010. The interpretive markers would introduce distinguishing elements of each traditionally associated tribe’s identity, whether through the use of each tribe’s language or other stylistic design or iconography. They would also welcome visitors to the Inter-tribal Cultural Heritage Site. Each marker would be crafted from natural stone, scaled, and styled to be compatible with surrounding infrastructure and matching the material and color of existing stone work on-site (preferably using Kaibab limestone or materials of similar appearance). The threshold interpretive markers would be placed so as to not compete with or block views of or from the Watchtower or canyon.</p> <p>As needed, wayfinding signs and/or markers would be added along the main pedestrian paved trails to help guide visitors to key site destinations. Signs/markers would be fabricated out of weathering steel and/or stone and would be compatible with the park-approved sign plan.</p>

VISITOR SERVICES

<i>Site Orientation</i>	<p>The existing road between the east and west parking lots would be removed and converted into a visitor use area, with an entry (“identity”) sign for the Inter-tribal Cultural Heritage Site, new restrooms, and a site-orientation plaza.</p> <ul style="list-style-type: none"> • The entry sign would be visible to motorists as they approach the east and west parking lots and would be located to the north of the “T” intersection. The height and scale of the sign would therefore be prominent, but subservient in scale, to adjacent structures and designed (including size, scale, workmanship, and materials) to be compatible with the surrounding area. The sign would feature designs that represent both historic and present day tribal images (photographs and/or artwork), and a trail would be installed around the sign to give pedestrians safe access to take photos of and with the sign. • The orientation plaza, to be located just north of the toilets, would include some ramada or ramada-like structures for shade, and would provide simple orientation to the site (e.g., map of facilities). The orientation plaza may include tribal influenced design elements and tribal interpretive exhibit panels.
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VISITOR SERVICES (continued)

<i>Site Orientation (continued)</i>	<ul style="list-style-type: none"> The new restrooms would have approximately ten individual stalls serving all genders, would include at least one ABA accessible stall, and would have some storage for a mop sink and cleaning and maintenance supplies. The restrooms may have flush, vault, or composting toilets. The facilities (likely two buildings) would be oriented for ease of visibility and access from the parking lots, and would be single-story, low profile structures so as to not compete with other features on-site.
<i>Picnic Areas and Small Visitor Amenities</i>	<p>The existing picnic area to the north of the east parking lot would remain and could be expanded (i.e. more picnic tables added) to accommodate visitors arriving at the bus drop-off. Additional (up to five) small picnic areas would be sited close to the restrooms and entry sign in an existing disturbed area. Up to eight small picnic areas (each approximately 20x20 ft or 400 sq ft) would be distributed around the edges of the both parking lots for easy vehicular access. Where shade from existing vegetation is not sufficient, some of the materials from the Welcome Shelter and two shade structures to be removed could be adaptively reused and relocated, at a lower profile, to provide shade for these new picnic areas as necessary.</p> <p>Existing metal benches throughout the area would also be replaced with stone benches of similar material and color of existing stonework on-site to harmonize with the built environment. These could be stone masonry and/or larger, bench-sized, stones that may be carved or engraved with tribal quotes or designs.</p>
<i>Amphitheater</i>	<p>The existing amphitheater would remain at the current capacity of approximately 60 people, but would be improved through grading and the addition of a more durable ABA surface, such as stabilized crushed stone. Stone benches, at least some of which would include backs, would replace the existing wooden benches. As needed, a stone masonry retaining wall (potentially with steps integrated) would be added along the existing western paved trail, and a short (approximately 60 ft long and no more than eight ft wide) ABA trail would be added to connect the amphitheater with the western paved trail. This trail could be paved or composed of crushed stone. The “stage” at the front of the amphitheater would also be improved with a hardened, level surface to accommodate a variety of uses including interpretive talks and performances; potential surface materials include flagstone, concrete, or stabilized crushed stone.</p>
<i>Cultural Demonstration Spaces</i>	<p>A currently disturbed area just south and west of the Watchtower would be minimally enhanced to formalize an outdoor cultural demonstration space and/or performance area. This area is heavily disturbed currently by foot traffic and work-related vehicular access to the Watchtower. The space would be graded, leveled, and the native soil would be compacted for use as a demonstration space. A few native boulders would be placed in select areas near existing trees to both protect the trees and provide informal seating for visitors watching demonstrations or performances. Trees would not be removed and vehicular access would be retained, though areas not needed for official use could be revegetated to minimize the size of the existing disturbed footprint.</p> <p>A second outdoor cultural demonstration space would be developed adjacent to the Old Bookstore (building #41), near the intersection between the Trading Post (building #1168) and the paved trails leading to the General Store (building #1388). The purpose of this area would be to provide outdoor cultural demonstrations and tribal exhibits. The design features of this demonstration space would blend into the natural and historic fabric of the site and may include the use of ramadas (both as shade structures and as visual orientation to the site); stone seat walls; and hardened surfaces, such as concrete, flagstone paving, and/or stabilized crushed stone. To accommodate food heritage demonstrations, such as bread making or roasting, an outdoor bread oven, roasting pit, and/or equivalent would be located adjacent to the plaza area. It would be designed to allow for viewing while limiting direct visitor access as a safety precaution when fire is in use.</p>

VISITOR SERVICES (continued)

<i>Cultural Demonstration Spaces (continued)</i>	Should demonstrations grow to such a scale that another, more formal, space be required, the NPS could consider relocating this function or constructing an additional, more developed site, within the Desert View visitor services area but outside of the Desert View Watchtower National Historic Landmark. Additional compliance with the National Environmental Policy Act, National Historic Preservation Act, and other applicable laws and policies would be completed at that time should the NPS pursue this option in the future.
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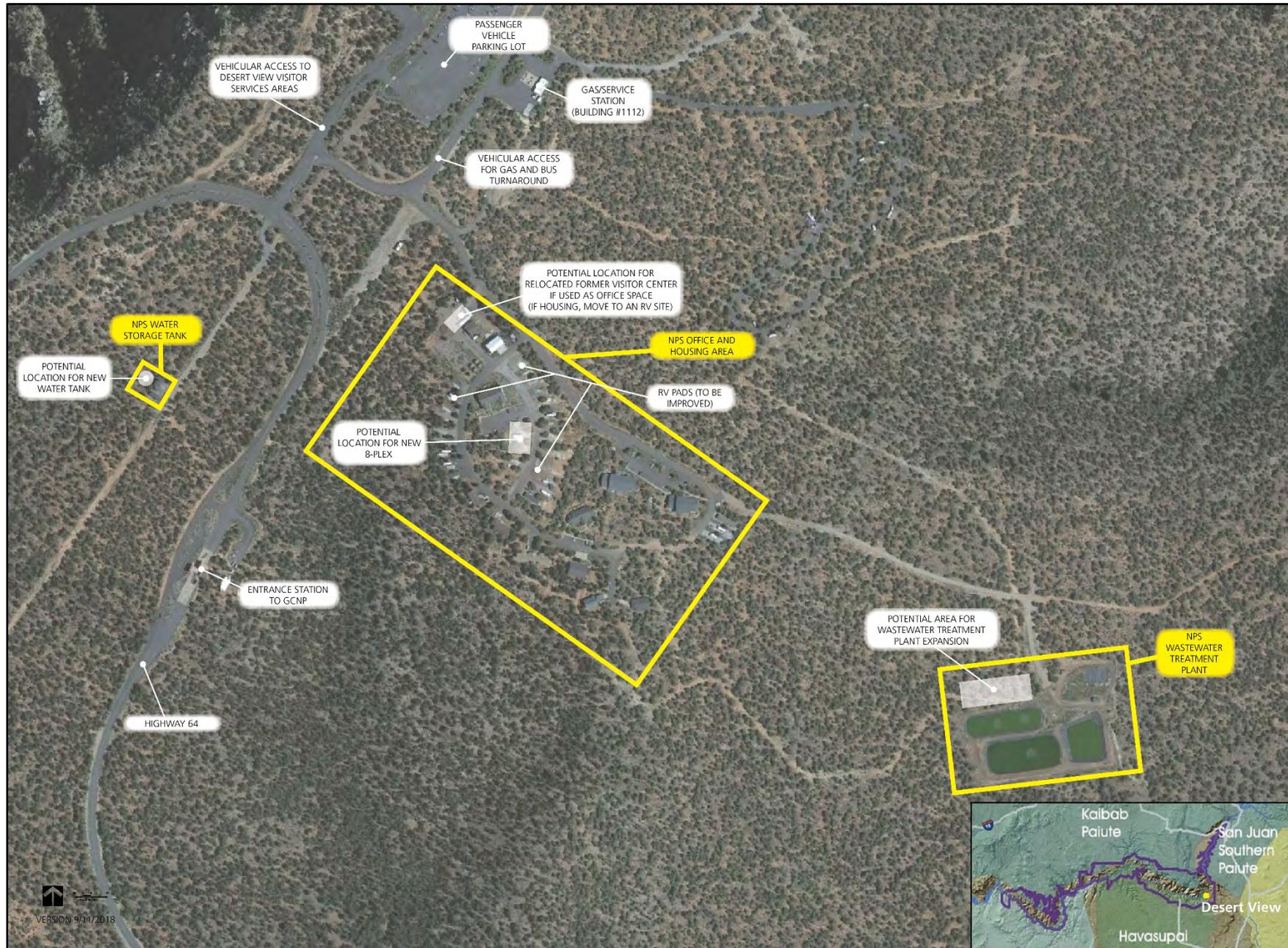
ADAPTIVE REUSE OF BUILDINGS

<i>Former Visitor Center</i>	Under this alternative, the former visitor center (building #915) would be relocated to an existing disturbed area within the NPS administrative area at Desert View (see Figure 2.3 on page 16). The original purpose of this building was to provide dormitory style housing, and it could be converted into housing or park offices that could also include a community space. If converted to office space, the visitor center would be used to replace two deteriorating office trailers in their existing location. If converted to housing, the building could also be sited in an existing disturbed area (such as one of the RV sites) within the Desert View housing area. Utility infrastructure to the building's current location would be capped in place, and the structure would be relocated to an area with existing utility lines, such as a current RV site. Utility connections to the relocated building would be required (approximately 40 ft). If sited in an existing RV site, this could entail replacement in kind of the existing pipe to increase capacity. Internal modifications to this structure would be required, particularly if converted to housing.
<i>Old Bookstore</i>	Under this alternative, the Old Bookstore (building #41) would be rehabilitated to provide both a public space for cultural demonstrations, exhibits, and/or tribal tourism information, as well as an improved private space for a break room and rest area for staff and cultural demonstrators. Rehabilitation would include code compliant upgrades to the electrical and fire protection systems, a private restroom, replacement of the membrane roof, and potentially modifications to the primary entrance doors. Some of these upgrades would also address deferred maintenance.
<i>Search and Rescue/Fire Cache</i>	The Search and Rescue/Fire Cache (building #83) would also be rehabilitated and converted into a support building for staff and cultural demonstrators that would be closed to the public. The building could be used as a break and/or demonstration preparation space, and could include at least one bathroom, lockers, and a small kitchen for food demonstration preparations. No exterior modifications would be made, and no new utility lines would be required as the building was previously plumbed as a residence.
<i>Other Buildings</i>	Other existing, non-historic buildings (post-1972), including a small restroom facility (building #1410, also known as a Comfort Station) adjacent to the General Store (building #1388) could be reconfigured inside to support programming and park staff needs, such as storage.

OTHER INFRASTRUCTURE

Future projects that may occur in support of this plan include the potential for additional housing within the administrative area, the potential expansion of the wastewater treatment plant farther to the east, and an additional water storage tank adjacent to the existing tank on-site (see Figure 2.3 on page 16).	
<i>Housing</i>	Housing improvements could include the rehabilitation of existing RV pads and/or the construction of a new eight-plex apartment unit adjacent to an existing apartment unit and parking area. This new housing unit would be of a similar size (approximately 90x60 ft) and design as the existing eight-plex apartment unit at Desert View that was constructed in 2002. Much of the necessary parking and underground utility

FIGURE 2.3: PROPOSED SITE PLAN FOR NPS ADMINISTRATIVE USE AREA – PREFERRED ALTERNATIVE AND NPS PROPOSED ACTION



OTHER INFRASTRUCTURE (continued)

<i>Housing (continued)</i>	infrastructure to support such a structure is in place, but up to 1,000 ft of sewer line would potentially be needed to make the appropriate connections between this structure and the main line.
<i>Wastewater Treatment Plant</i>	The wastewater treatment plant would also likely need to be expanded, either within the existing footprint (i.e. making existing lagoons deeper or changing the technology on-site) or an increased footprint of no more than one acre to accommodate an additional lagoon. The NPS would also consider installing a trash rack and flow meter on the north side of the site to reduce trash within the lagoons. This would include the construction of a small (20x40 ft) building. These modifications would be made to support facility improvements and increases in visitation, particularly if flush toilets are used at the new comfort stations proposed within this alternative.
<i>Water Storage</i>	The NPS would also consider installing a second water tank immediately adjacent to the existing tank to increase capacity for fire suppression. This tank would be approximately 50 ft in diameter and would require the existing fence to be extended by no more than 200 ft and an additional, up to, 150 ft of utility lines would be needed between the new and existing tanks.
<i>Utilities</i>	<p>Any construction within the visitor services area and administrative/housing area would be in areas already largely disturbed by previous building construction or by the installation of existing underground utilities. Much of the necessary existing underground utility infrastructure is in place but connections of new structures to these existing utilities would be required and any undersized or substandard utilities would be replaced in situ.</p> <p>Approximately 250 ft of utility lines would also need to be replaced or upgraded in the visitor use area at Desert View as part of this alternative.</p>

FUTURE CULTURAL HERITAGE CENTER BUILDING

In addition to the previously mentioned modifications, the NPS would continue to work closely with associated tribes and other partners to outline the design and programming needs and develop a business plan for a Cultural Heritage Center building that would feature traditionally associated tribes of the Grand Canyon through exhibit and demonstration space. The new center, which could either be a new building or addition to or reuse of an existing building, would include designated space for sharing tourism information on neighboring tribal lands. Based on the programming needs and business plan—which would help inform the ultimate size and configuration of the building—this Cultural Heritage Center could be located in one of three areas at Desert View, listed below.

Should the continued success of cultural programming, operations, and tribal partnerships grow as envisioned under this plan, the NPS would evaluate the design and potential construction of a Cultural Heritage Center in a subsequent phase of this project. Although the general impacts from a new building are included within the analysis on environmental consequences within this Plan/EA, future site specific analysis and associated compliance would need to be completed for the Cultural Heritage Center, tiered, as appropriate, to this document.

<i>Option 1: Vicinity of Parking Lots</i>	When the NPS conducted public scoping meetings in February 2018, the proposed action considered constructing a new, approximately 3,200 square foot facility near the existing bus parking lot. A center in this location would be constructed outside the historic district and would likely provide the largest area for programming and exhibits.
<i>Option 2: Addition to the Old Bookstore (building #41)</i>	This proposal would expand the Old Bookstore (building #41) with a building addition that would be designed so that it is compatible with, but distinct from, the Old Bookstore (in scale, color, and building materials). This proposal would have the advantage of adaptive reuse of existing historic buildings and would contribute to the low-profile improvements desired for the heart of the Desert View site.

FUTURE CULTURAL HERITAGE CENTER (continued)

<i>Option 3: Repurpose the Trading Post building (building #1168)</i>	In addition to a newly constructed building, a previously evaluated proposal could also be revisited, which would include the NPS assuming management of the Desert View Trading Post (building #1168) after the existing concession contract expires at the end of 2029. This proposal was considered in the 2002 Desert View Improvements and Road Rehabilitation EA. At that time, the proposal was cost-prohibitive and dismissed from further consideration. For the current proposal however, the site plan elements listed above would create a close visual connection between the Trading Post (building #1168) and the Old Bookstore (building #41), creating a hub of activity and interest between this area and the Watchtower.
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Design

All modifications and new features outlined above would be designed in adherence to the Secretary of the Interior's Standards for the Treatment of Historic Properties and would be finalized through additional consultation with the Arizona State Historic Preservation Office (SHPO).

Construction

Desert View would remain open to the public throughout implementation of this alternative, with some potential closures of trails and buildings undergoing construction. For example, specific parking lots, buildings, trails, the amphitheater, and other areas may be closed to the public during construction on that feature, but at no time will the entire visitor services area be closed to the public. The NPS would avoid closures as much as possible, but necessary closures could extend from a few hours or days (i.e., for the installation of the threshold signs) to weeks and/or months (i.e. for the construction of the outdoor demonstration space near the bookstore or construction of a Cultural Heritage Center).

The NPS estimates that on-site construction, including utility improvements, could occur over the course of three to five years, with projects focused on individual elements of the preferred alternative rather than conducting all construction as one large project. However, the development of the Cultural Heritage Center could be extended beyond this five year timeline depending on how the site evolves, how long it takes to identify programming needs, and the location pursued in the future.

At this time, the NPS does not anticipate needing to utilize blasting during construction. However, should blasting be determined necessary in order to implement this alternative, additional compliance may be required to address concerns such as visitor safety and impacts to wildlife.

ALTERNATIVES CONSIDERED AND DISMISSED

Repurpose Former Visitor Center

The NPS considered converting and reusing the former visitor center (building #915) as a Cultural Heritage Center—reusing a structure in place. The existing building was originally designed and configured to be dorm quarters for several occupants. As a result, the building looks like a typical NPS park housing unit from the 1940's and does not resemble, in architecture or orientation, a building for visitor services. Nor does it have any qualities that would be considered inherently tribal, or would otherwise visually suggest a cultural center. In fact, the NPS previously used this building as a visitor center, but the building's awkward orientation toward the parking areas created an unclear means of entry for visitors, which left the building underutilized as a contact station when it was open for that purpose. Major modifications to and expansion of the building would therefore be required to significantly rehabilitate the building to have both a tribal expression and to make it suitable for visitor use as a cultural heritage center. The NPS dismissed this alternative element from further analysis as the reuse of this structure was either unable to resolve the purpose and need for taking action (building would either be too small or design elements would not be addressed) to a large degree or would otherwise be unreasonably expensive (NPS 2015, 4.3A).

Construct a Cultural Heritage Center in the Location of the Original Parking Lot

After internal reviews of potential locations for siting a Cultural Heritage Center, staff suggested another potential location for a new building that could also reestablish an important component of the circulation pattern and spatial organization of the site to the period of significance of the historic district circa 1941: construct a new cultural heritage center in the location of the original parking lot. While this option would be entirely within disturbed land and could provide substantial interior space for programming and exhibits, it was dismissed from further consideration. This option would essentially duplicate the first option listed in the preferred alternative (new building) and would have greater negative, if not potentially adverse, impacts on the Desert View Watchtower National Historic Landmark (NHL) and the Desert View Watchtower Historic District due to its location, which would be immediately adjacent to the NHL and within the historic district. In this location it would be far more prominent on the landscape than a new building near the parking lots (NPS 2015, 4.3A).

MITIGATION MEASURES

The following mitigation measures would be implemented to minimize the degree or severity of adverse impacts to resources.

Air Quality

- If the contractor chooses to locate an asphalt or concrete batch plant within the park, it would use propane, rather than diesel fuel.
- To reduce entrainment of fine particles from hauling material, sufficient freeboard would be maintained and loose material loads (aggregate, soils, etc.) would be tarped if transported across Desert View Drive (South Entrance to Desert View).
- To reduce tailpipe emissions, construction equipment would not be left idling any longer than is necessary for safety and mechanical reasons.
- To reduce construction dust in the short term, water would be applied to problem areas. Equipment would be limited to the fenced project area to minimize soil disturbance and consequent dust generation.
- Landscaping and revegetation would control long-term (i.e., in perpetuity) soil dust production. Mulch and the plants themselves would stabilize the soil and reduce wind speed/shear against the ground surface.

Wildlife and Special Status Species

- Prior to start of work, the Project Leader would contact the Wildlife Program Manager at GCNP to verify that locations of sensitive wildlife species are adequate distances (as described below) from project site.
- If bats are encountered on buildings during construction, all activity would immediately cease, staff and personnel would avoid all interaction with the bat(s) and would and contact Park Dispatch and the park's Wildlife Program for assistance and/or advice in removing them safely.
- Project staff would comply with the Migratory Bird Treaty Act [16 USC 703]. Any active bird nest would be left in place and undisturbed until the young hatch and depart. Vegetation clearing would be avoided to the greatest extent possible during the primary nesting season, early April through mid-August. If vegetation clearing must occur within the primary nesting season, surveys for active nests would be conducted by a qualified biologist. Vegetation clearing within the primary nesting season would only be allowed after the qualified biologist determines that no nests are present or they are inactive.
- When building designs and landscapes are being considered, reducing impacts to migratory birds would be factored in to the designs (e.g. window placement and reflectivity, proximity of vegetation to buildings, lighting).
- Dark sky compliant lighting would be used throughout the site, and consideration would be made for motion sensors and down-shielding as is feasible and appropriate.

- Wildlife-proof trash cans would be the receptacles used throughout the area. When designing picnic areas, trash amounts, disposal, and potential of blowing into the canyon would be evaluated.
- Wildlife would not be fed or approached.
- Trash receptacles and all dumpsters would be tightly covered to avoid wildlife access.
- For any projects involving trenching or digging holes, provisions (generally in the form of ramps; with a slope < 45°) would be made every 20-50' to allow for the escape of animals that may fall into these recesses, and/or they would be covered in such a way as to prevent animals (vertebrates) from falling into them.
- If using erosion netting, biodegradable matting with a large diameter natural fiber would be used to prevent entrapment of wildlife.
- Care would be taken not to disturb any wildlife species (reptiles, migratory birds, raptors, or bats) found nesting, hibernating, estivating, or otherwise living in, or immediately nearby, worksites.

California Condor

- Prior to start of work, the Project Leader would contact the Wildlife Program Manager at GCNP to verify that locations of California condor are adequate distances (as described below) from project site. If condor nesting activity is known within 0.5 mile of the project area, then light and heavy construction in the project area would not be permitted during the active nesting season: February 1 to September 30. These dates may be modified based on the most current information, in consultation with the park biologist and the USFWS.
- If and when condor(s) occur at a work site, project staff would immediately cease all activity, avoid interaction with condors, and contact Park Dispatch and the park's Wildlife Program. Work would only resume if and when the condor(s) leaves on its own or until techniques are employed by permitted personnel which results in the individual condor leaving the area.
- The work site would be cleaned up at the end of each day work is being conducted (i.e. trash disposed of, scrap materials picked up) to minimize the likelihood of condors and other wildlife visiting the project site. Park staff would complete periodic site visits to the area to ensure adequate clean-up measures are taken.
- If the new Cultural Heritage Center is constructed to a height above the forest canopy, there may be a need to install condor deterrent devices on the structure. This would be evaluated on a case-by-case basis by the park wildlife biologist.

Mexican Spotted Owl

- Prior to start of work, the Project Leader would contact the Wildlife Program Manager at GCNP to verify that locations of Mexican Spotted Owl are adequate distances (as described below) from project site. If Mexican spotted owl nesting activity is to be known within 0.5 mile of the project area, light and heavy construction work would not be permitted during the MSO breeding season of March 1 – August 31.

Vegetation and Soils

- The staging area for a construction office (a trailer), construction equipment, and material storage would be located in previously disturbed areas near the project site and would be park-approved. All staging areas would be returned to pre-construction conditions once construction is complete. Standards for this, and methods for determining when the standards are met, would be developed in consultation with the park restoration biologist.
- Construction zones would be fenced with construction tape, snow fencing, or some similar material before any construction activity. The fencing would define the construction zone and confine activity to the minimum area required for construction. All protection measures would be clearly stated in the construction specifications, and workers would be instructed to avoid conducting activities beyond the construction zone as defined by the construction zone fencing.

- Standard erosion control measures such as silt fences, sand bags, or equivalent control methods would be used to minimize any potential soil erosion.
- Tree and plant protection measures would be installed on area where impacts are possible including fencing, tie-backs, and trunk guards. Tree root protection zones would be established within construction zones as necessary. Trunk protection would be installed in areas where mechanized equipment is being used.
- Park pruning guidelines would be followed at all times, including trees whose roots must be pruned due to excavations. Tree root zones would remain intact and be protected from disturbance to the greatest extent possible. Branches that must be trimmed would be done so in a manner that reduces the risk of introduction of diseases to the trees.
- Silt fencing fabric would be installed and inspected weekly or after every major storm. Accumulated sediments would be removed when the fabric is estimated to be approximately 75% full and be disposed of in the GRCA dry dump whenever possible. Silt removal would be accomplished in such a way as to avoid introduction into any floodplains, wetlands, or other water bodies.
- Although soil side-cast during construction would be susceptible to some erosion, such erosion would be minimized by placing silt fencing around the excavated soil. Excavated soil may be used in the project or stored in approved areas and used elsewhere in the park at NPS' discretion.
- Any trenching operations would be by rock saw, backhoe, trackhoe, and/or trencher, with excavated material side-cast for storage. After trenching is complete, bedding material would be placed and compacted in the bottom of the trench and the utility lines installed in the bedding material. Back filling and compaction would begin immediately after the utility lines are placed into the trench, and the trench surface would be returned to pre-construction contours. All trenching restoration operations would follow guidelines approved by park staff. Compacted soils would be scarified and original contours reestablished.
- A Salvage and Revegetation Plan would be developed for the project by a landscape architect or other qualified individual, in coordination with the park restoration biologist. Any revegetation efforts would use site-adapted native species and/or native seed, and park policies regarding revegetation and site restoration would be incorporated into the plan. The plan would consider, among other things, the use of native species, plant salvage potential, exotic vegetation and noxious weeds, pedestrian barriers, and watering.
- Any fill, rock, or additional topsoil needed would be obtained from a park-approved source.
- All areas disturbed by construction would be revegetated using site-adapted native seed and/or plants.
- Watering, monitoring, and follow-up treatment of exotic vegetation post re-vegetation efforts would occur for as long as necessary after construction is completed.
- Inventories for existing populations of exotic vegetation at construction sites, including staging areas, would occur where prescribed by the park vegetation program manager or their designee and any populations found would be treated prior to construction activities.
- A restoration biologist would provide input on tree avoidance at project sites where necessary. A restoration biologist would also spot-check the work progress for adherence to mitigation measures related to vegetation.
- Where existing vegetation is within a larger construction zone, existing vegetation to remain would be protected by fencing; for trees, fencing should be placed at a minimum at the drip line or further away from the trunk(s).
- Parking of vehicles would be limited to existing parking, roads or the staging area.
- Use of mechanized equipment and heavy machinery would be limited to the maximum extent possible.
- All construction equipment that is transported to the site from another location, or would leave paved or dirt roads, would be pressure-washed prior to entering the park and would be clean of any soil, plant matter, or other materials in order to minimize the potential to import invasive

plant seed/material to the site. Vegetation management program staff or the project manager would inspect the vehicles prior to entry into the park.

- All construction equipment would stay on paved surfaces when surrounding soils are wet to prevent rutting.

Water Quality

- Grand Canyon's "Parkwide Spill Response Plan" would be utilized by park employees and contractors to prevent soil and water contamination and associated impacts to wildlife. The project leader is responsible for signing and implementing this plan (located on the park's SharePoint site on the Planning and Compliance page).
- A storm water pollution prevention plan (SWPPP) would be developed by the contractor and approved by the park prior to any ground-disturbing activities. All National Pollutant Discharge Elimination System (NPDES) requirements would be met.
- Standard erosion control measures such as silt fences, sand bags, or equivalent control methods would be used to minimize any potential sediment delivery to streams.

Cultural Resources

- Although the NPS would replant all areas where existing pavement and other facilities would be removed, replanting efforts would be minimized within the former historic alignment of Desert View Drive and the former crescent-shaped parking lot to maintain a visual tie to these cultural resources.
- Although there is no surface evidence of archeological resources, should construction unearth previously undiscovered archaeological resources, work would be stopped in the area of any discovery and the park cultural staff immediately notified. Park cultural staff would determine if further consultation with the State Historic Preservation Officer, the park's traditionally associated tribes, and the Advisory Council on Historic Preservation is necessary. Work cannot continue in the area of discovery until the discovery is evaluated and any necessary mitigations implemented, including consultations.
- In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) and the Memorandum of Agreement Regarding Collections, Inadvertent Discovery, and Intentional Excavation of American Indian Human Remains, Funerary Objects, Sacred Objects, and Objects of Cultural Patrimony at Grand Canyon National Park, Arizona (2007) would be followed.
- The NPS would ensure that all contractors and subcontractors are informed of the penalties for illegally collecting artifacts or intentionally damaging archaeological sites or historic properties. Contractors and subcontractors would also be instructed on procedures to follow in case previously unknown archaeological resources are uncovered during construction. Construction activities, including equipment traffic, would be minimized in the area near sites and would avoid known archeological resources. Known sites within the project area would be fenced for avoidance prior to project implementation.
- All undertakings affecting historic buildings, and structures would be carried out in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (60 FR 35842-35844, 36 CFR Part 68), with emphasis on preservation and rehabilitation and other applicable cultural resources policies and guidelines.

Acoustic Environment

- All construction equipment would have properly functioning mufflers.
- Construction equipment and associated equipment and vehicles would not be left idling any longer than is necessary for safety and mechanical reasons.
- Unless otherwise approved by the park, construction activities would be restricted to 7:00 a.m. to 6:00 p.m. in the summer (May 1- September 30) and 8:00 a.m. to 5:00 p.m. during the rest of the year.

Visual Resources

- Removal of trees would be minimized to the greatest possible extent. Clearing would be limited to the immediate construction zone during trenching and other construction. Construction or protection fencing would surround the established construction zone to minimize damage to vegetation and other features by construction equipment and to define access to the construction site.
- Alignment of new utility corridors would be located where possible through existing open clearings in forested areas and avoid root system-areas. Trench locations would be placed perpendicular to roadways to create as short a duration of viewing time for visitors to the disturbed area as possible.
- Trenching for underground utilities would be limited as much as possible to a 10-foot wide fenced construction zone. Clearing of trees and understory would be feathered to blend with natural openings in the forest canopy.

Visitor Use and Experience

- Traffic in any one direction would not be stopped for more than 15 minutes to minimize disruption to traffic flow.
- Unless otherwise approved by the park, construction activities would be restricted to 7:00 a.m. to 6:00 p.m. May 1- September 30 and to 8:00 a.m. to 5:00 p.m. during the rest of the year.
- Contractors would coordinate with park staff to minimize disruption to normal park activities. Equipment would not be stored along the roadway overnight without prior approval of park staff. Construction workers and supervisors would be informed about the special sensitivity of park values, regulations, and appropriate housekeeping.

Human Health and Safety

Structural and Wildfire

- Any provided bread oven or roasting pit would be prohibited from use when the fire danger for the Desert View area is listed as high, very high, or extreme.
- Food heritage demonstration spaces, such as the roasting pit or bread oven, would remain attended at all times while in use. If open fire was introduced during the course of a demonstration, the area may not be vacated until the fire is completely out and ashes cold to the touch.
- Some form of barrier (whether temporary (intended for removal within five to 10 years) or permanent) would be installed to provide separation between visitors and an active oven or burn pit.

Food Preparation

- All cultural demonstrations associated with demonstrating food heritage items would be limited to selling food products on no more than 14 days/year (per demonstrator) and would apply and obtain a special use permit from the NPS for the sale of any food on-site. The demonstrator would also need a permit from the state/county and would need to comply with all current NPS food vendor policies (which currently entails submitting a food vendor application to the park at least 30 days in advance of the activity). So long as a cultural food demonstrator's activities are consistent or of similar nature throughout the course of a year, permits could be issued on an annual basis, as opposed to per event.

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Chapter 3 - Affected Environment and Environmental Consequences

VISITOR EXPERIENCE – INTERPRETIVE AND EDUCATIONAL OPPORTUNITIES

Affected Environment

As discussed previously, Desert View draws visitors to the easternmost point of GCNP because of the spectacular views of the Colorado River, the Painted Desert and surrounding lands, as well as the Desert View Watchtower. The Desert View Drive is a scenic highway that brings visitors from the South Rim village, providing sweeping views of the canyon along the entire length of this 25-mile drive. In addition, the cultural demonstration program initiated by the NPS has grown in success over the past three years. The demonstration program has hosted well over 100 different artists since its inception, and the NPS now offers cultural demonstrations within the Watchtower five days a week during the summer season. In 2017 alone, Desert View saw 175 calendar days of demonstrations, with an average of two demonstrators each day (B. Gatlin, personal communication, February 20, 2018).

The current estimates of visitation to the Desert View area are based on a combination of traffic counts of vehicles entering the park at the east entrance and door-counts acquired at the Watchtower. As it has in the rest of the park, visitation to Desert View has risen sharply in the last several years. Whereas approximately 742,000 visitors entered the park at the east entrance in 2015, approximately 871,000 visitors entered the park at this location in 2017; a 17% increase (NPS n.d.). Visitation to the Desert View Watchtower shows a similar trend. In 2015, staff counted 573,000 visitors to the Watchtower. Within two years, visitation had grown to approximately 675,000 visitors; an 18% increase (B. Gatlin, personal communication, February 28, 2018). A new counter at the Watchtower was installed in 2018. Recent data collected from this counter suggests annual visitation to the Watchtower may be much higher than previous estimates reflect (B. Gatlin, personal communication, July 25, 2018).

Most visitors to Desert View are day-users and are on-site for a short period of time. Only those camping at the Desert View Campground (open April-October with capacity of 50 sites) are on-site for more than several hours and typically stay between one and three days (B. Gatlin, personal communication, April 2018).

When elements of the 2002 Road Improvements EA and Plan were not implemented in subsequent years, Desert View site orientation information was left as minimally functional, and often confusing for visitors. The infrastructure changes at the time, such as the adaptive reuse of former administrative buildings as a visitor center, did not meet the visitor's needs as intended, and visual barriers from the parking areas still exist between visitors and the canyon rim and the Watchtower. Furthermore, while the construction of a new restroom on the eastern edge of the site in 2000 addressed imminent visitor needs for bathroom facilities, the structure is overused and often full, particularly on high visitation days, and is not readily visible or readily accessible to visitors who park on the western edge of the site.

Because the Watchtower is a primary focal point, second only to viewing the canyon, visitors can often expect large crowds and bottle-necking of access inside and around the Watchtower. During the summer, the interior temperatures rise to uncomfortable levels within the Watchtower due to humid monsoonal weather combined with the sheer volume of people. Between crowding, limited access to amenities, and general confusion navigating around the site, the current experience for most visitors at Desert View is one that can be improved.

Environmental Consequences

Impacts of Alternative A – No-Action

Direct and Indirect Impacts

No additional impacts are expected from Alternative A as the site would continue to be utilized much as it is today. The Watchtower would continue to be a primary focal point, and cultural demonstrations would be held inside. Buildings such as the Old Bookstore (building #41) and the former visitor center (building #915) would remain closed to the public, and no modifications would occur for paved trails, the Welcome Shelter, and two shade structures. Therefore, circulation and views for visitors as well as interpretive programming would generally remain as they are.

Cumulative Impacts

Past, present, and reasonably foreseeable actions have and will continue to both beneficially and adversely impact the visitor experience at Desert View. Past changes to the site include the post-war era (1945-1966) developments to increase visitor services which include the expansion of camping facilities and the construction of new restrooms, the gas station, and a general store. Past impacts from development also include the realignment projects for Desert View Drive, which removed the site's original roads and parking areas and resulted in crowding and unclear site orientation. More recent changes to the site (since 2010)—including the construction of new trails, the Welcome Shelter, and shade shelters—have not functioned as initially planned, and have resulted in additional negative impacts to site circulation. These past developments at Desert View have resulted in many of the undesirable visitor experience issues the park faces presently—primarily crowding and unclear site orientation—but also increased the number of services for visitors. Present interpretive and educational opportunities for visitors have also been enhanced over the last few years with the addition of cultural demonstrations in the Watchtower. Collectively these past and present actions have resulted in cumulative beneficial impacts the visitor services and cumulative adverse impacts to visitor orientation. No additional foreseeable future actions would impact visitor experiences on-site. No new direct or indirect impacts, therefore no cumulative impacts, are expected under the no-action alternative.

Impacts of Alternative B – Preferred Alternative and NPS Proposed Action

Direct and Indirect Impacts

Multiple beneficial impacts are expected from the preferred alternative because the site would begin to function as a more cohesive, intuitive place to visit. New waysides and other exhibited information would provide a clearer depiction of the importance of Desert View as well as the importance of the larger Grand Canyon landscape to each of the tribes.

The primary benefit to this proposal regarding visitor use is the increased access to a range of educational and cultural experiences that arise from having direct, personal conversations and learning interactions with members of the Grand Canyon's traditionally associated tribes. Other beneficial impacts anticipated include improved access to parking for personal vehicles, clear and improved access to restrooms, and improved wayfinding around the site. Removing obstructions and improving views upon arrival has the benefit of accentuating a visitor's sense of arrival to a special place, and it more closely mirrors the original intent of the Desert View experience. The improved accessibility around the site to the canyon rim, amphitheater, Watchtower, visitor services such as the restrooms and stores creates safer access and allows visitors of various abilities to access these amenities. The removal of a non-historic trail that bisects the site (the existing central paved trail) would help alleviate some confusion that occurs for visitors orienting to the site. The formalization of the east and west unpaved rim trails also increases the variety of experiences for visitors on-site, allowing those who so desire to access views of the Canyon that are away from the primary sites and less crowded. Currently, these opportunities do not formally exist.

The adaptive reuse of buildings (i.e., the Old Bookstore, building #41) and other, non-formalized spaces (two cultural demonstration spaces) at Desert View also increases the number and diversity of experiences for visitors, with different types of educational experiences offered through a range of cultural

demonstration programs and exhibits. Currently, cultural demonstrations and exhibits are only offered in one facility—the Watchtower—which is also congested due to its other uses such as a bookstore and the views it provides of the Grand Canyon and Colorado River. The addition of multiple locations to host cultural demonstrations would disperse crowds among various locations throughout Desert View and may have the beneficial impact of reducing crowding within the Watchtower. Notably, some congestion is expected in these new, formalized spaces, such as just south of the Watchtower and outside of the Old Bookstore (building #41) where cultural demonstrations could be hosted in the future.

This alternative proposes many improvements around the site that the NPS expects to result in long-term, beneficial impacts to the visitor experience at Desert View, particularly with regards to the number and range of interpretive and educational opportunities and improvements to visitor orientation.

The NPS anticipates some short-term adverse impacts during construction. These impacts would be directly associated with on-site construction noise (see discussion on the Acoustic Environment/Soundscapes on page 3), possible detours, and intermittent and temporary (i.e., for no more than several weeks) closures over the course of 3-5 years as the NPS implements the aforementioned visitor improvements. These activities could disrupt individual visitors' experiences as most are on-site for only a few hours and likely during the day when construction activities would be occurring. While no buildings currently used by visitors would be closed to the public during construction, areas of the site, particularly those related to circulation such as segments of trails or portions of the parking lots, could be closed while work in that area is ongoing. The amphitheater is the only facility currently utilized in a formal capacity that would likely require closures during project implementation. Should these closures need to occur during the higher visitor use season, interpretive talks could be held elsewhere, but likely in a location that does not provide the same sweeping views of the canyon. These negative impacts related to construction would cease as soon as construction is complete and would be limited to day time activities only. Visitors at Desert View for the sunset (a high time of visitor use) would likely be spared the visual and noise impacts associated with active construction. Because visitors, regardless of duration and timing of their visit, would still be able to access most facilities and services on-site as currently provided, these impacts associated with implementation are unlikely to impact the overall visitor experience or visitors' access to interpretive and educational opportunities. All of the impacts described above would cease upon the completion of construction activities.

Cumulative Impacts

Past, present, and future actions that have and would impact interpretive and educational services for visitors would be the same as described under Alternative A.

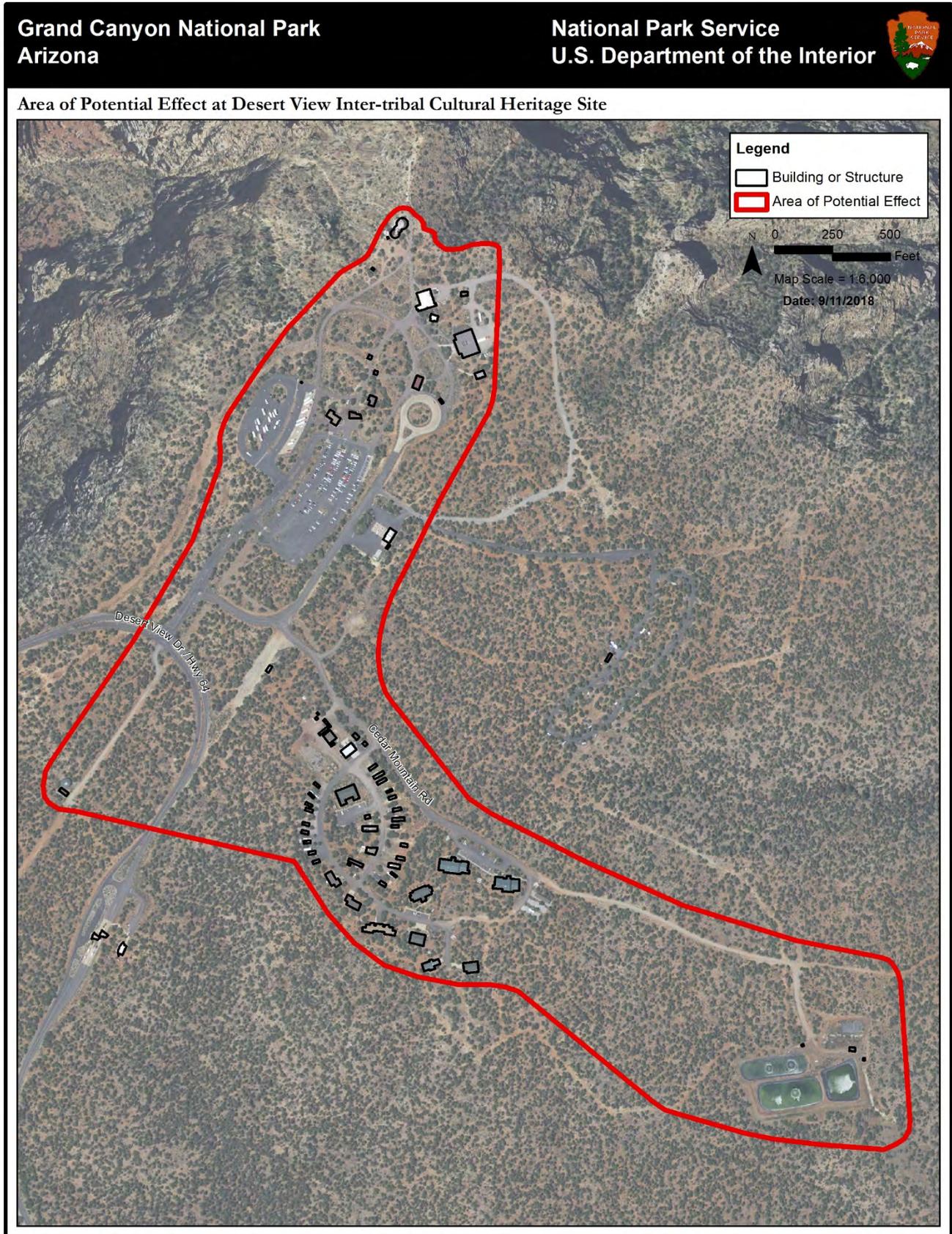
As previously described in this EA, the direct and indirect impacts of Alternative B on the visitor experience at Desert View – particularly with regards to interpretive and educational opportunities, would be largely beneficial: reversing some of the past impacts to visitor orientation, improving visitor orientation and crowding, adding visitor amenities (e.g. bathrooms), and expanding opportunities for direct interaction with tribal members who are best able to interpret and share with visitors their cultural and knowledge of the Grand Canyon and surrounding lands. Although Alternative B would not entirely reverse impacts to orientation from post 2000 actions, when the effects of the proposed action are combine with other past, present, and reasonably foreseeable future impacts, the total cumulative impact on the visitor experience at Desert View would be beneficial and long-term (in perpetuity) as interpretive and educational opportunities would be expanded, physical services would be enhanced, crowding would be reduced, and visitor orientation would be clarified.

CULTURAL RESOURCES – DESERT VIEW WATCHTOWER NATIONAL HISTORIC LANDMARK, DESERT VIEW WATCHTOWER HISTORIC DISTRICT, AND OTHER CULTURAL RESOURCES

Affected Environment

The area of potential effect (APE) includes much of the Desert View developed visitor use area as well as the NPS administrative and housing area south and east of the primary site (see Figure 3.1 on page 28). Historic

FIGURE 3.1: MAP OF AREA OF POTENTIAL EFFECT (APE)



properties are those cultural resources that are either listed, or eligible for listing, in the National Register of Historic Places (National Register). The APE includes the following historic properties/cultural resources and their associated features. (Historic and current photos of the some of the structures listed below are included in Appendix A.)

Desert View Watchtower National Historic Landmark

Listed in the National Register in 1987 as part of the M.E.J. Colter Buildings National Historic Landmark (NHL) District, the Desert View Watchtower NHL (see Figure 3.2 on page 30) consists of three buildings:

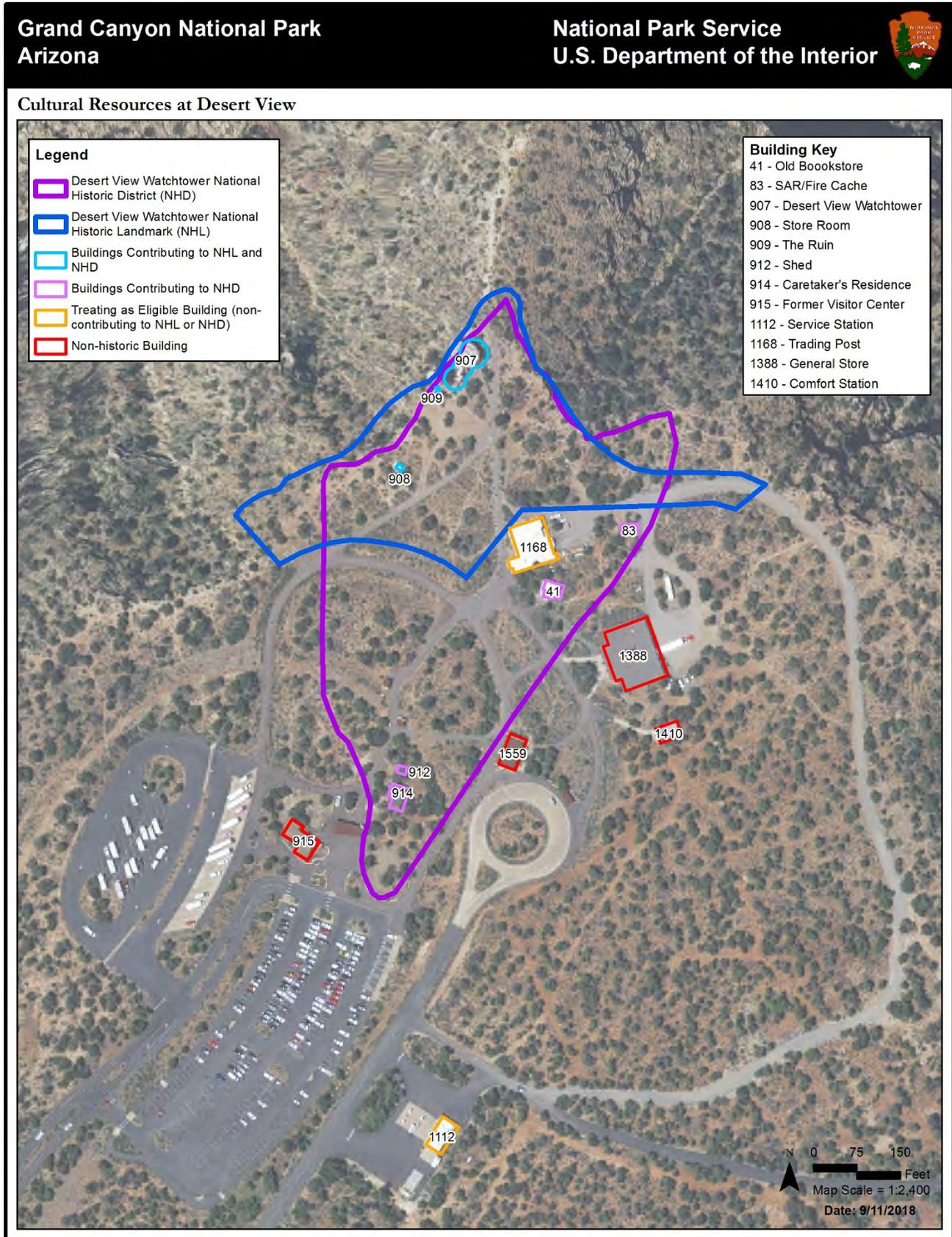
- **Desert View Watchtower (building #907):** Located on a promontory overlooking the Grand Canyon, the Desert View Watchtower is a reinforced concrete building with exterior stone veneer consisting of three principal sections: a lounge/gift shop modeled after an above-ground, single-story kiva; a five-story circular tower; and a connecting section with restrooms. The NHL nomination states that the Desert View Watchtower was sited at the eastern end of the South Rim of the Grand Canyon and was designed to mimic, but not replicate, the American Indian architecture of the American Southwest. Built in 1932 as a souvenir shop and lounge for Canyon viewing, the Desert View Watchtower was intended to harmonize with the cultural and natural environment, recalling prehistoric Puebloan architecture in its design, and in that respect also reflected the prevailing design principals of the NPS's rustic architectural style utilized throughout the national park system during that period (NPS 1987). Although not called out within the nomination form, the NPS also considers the historic flagstone entrance to the Watchtower an important feature that contributes to the building's integrity.
- **The Store Room (building #908):** The Store Room is a small concrete building with stone veneer built in 1941 by the Atchison, Topeka and Santa Fe Railway. It has projecting log vigas and a parapet roof.
- **The Ruin (building #909):** Constructed in 1932 for use as a wood storage structure, this building is commonly called the Ruin. It is a stone building immediately west of the Watchtower that serves as a storage facility. It was designed by Colter to appear as a prehistoric ruin.

The nomination for the NHL states that these buildings “are not only the best and least altered, but some of the only remaining examples of the work of master architect and interior designer Mary Elizabeth Jane Colter. Colter’s place in American architecture is important because of the concern for archaeology and a sense of history conveyed by her buildings, and the feelings she created in those spaces” (NPS 1987). “The buildings are also significant as part of the Atchison, Topeka, and Santa Fe Railway and Fred Harvey Company and their developments on the south rim of the Grand Canyon” (NPS 1987).

In addition to the NHL buildings, the NPS has identified other important elements that contribute to the NHL’s integrity of design, setting, and feeling:

- **Views to and from the Watchtower:** The Atchison, Topeka, and Santa Fe Railway and Fred Harvey Company first selected Desert View for tourism development due to its sweeping, panoramic views of the Grand Canyon (to the north and west), Painted Desert (to the east), and San Francisco Peaks (to the south). These views later influenced building locations, circulation patterns, and other design features. Due to the relationship of these sights with development, these important views include those *from* the Watchtower and rim of the Grand Canyon into the canyon and toward the Painted Desert and San Francisco Peaks, as well as views *of* the Watchtower from the surrounding area, including the former road location and parking lots.
- **Former alignment of East Rim Drive, former crescent-shaped parking lot, historic trails, and utility corridors (related to circulation):** East Rim Drive was extended to Desert View from Grandview Point between 1927 and 1931, and has been re-designed, widened, paved and realigned once in 1941-42, between 1956 and 1963, and again in 2003. Trails within the NHL were constructed by the Civilian Conservation Corps between 1933 and 1941. There is one trail with integrity that remains from this era (the East Rim Trail, described below).

FIGURE 3.2: CULTURAL RESOURCES WITHIN THE APE



Today, despite past modifications to site circulation, which in turn effected views to certain features of the NHL, the Desert View Watchtower NHL retains its integrity of location, design, setting, materials, workmanship, feeling, and association. A number of historic, as well as non-contributing structures and features are visible in the foreground of southerly views from the NHL, and a telecommunications tower partially obstructs the San Francisco Peaks as viewed from the top floor of the Watchtower, which all impact the NHL's integrity of setting.³ However, none of these structures or features impact important views of the Watchtower, Grand Canyon, Painted Desert, and San Francisco Peaks from the ground within the NHL itself, and the Watchtower and its surrounds continue to offer commanding views of the canyon below. Trails within the NHL, both formal and informal, have been modified over time—namely a central trail (see photo on page 45) was removed and the remaining trails have been paved—but as a whole, these changes do not detract from the historic scene.

Desert View Watchtower Historic District

The Desert View Watchtower Historic District (historic district) was listed on the National Register in 1995. The nomination form states that “in addition to having nationally significant architectural components [the Watchtower and two associated buildings], the Desert View complex is significant locally for its role in the railway's development of tourist facilities in Grand Canyon National Park and [the] NPS response to facility development in the park” (see Figure 3.2 on page 30) (NPS 1994).

The 16 acre historic district includes buildings and structures that were constructed during the district's period of significance, 1930-1941, and which “illustrate the Rustic style of architecture adapted with elements of National American architecture as well as the NPS Rustic architecture developed by the NPS” (NPS 1994). These contributing buildings include the following:

- **Desert View Watchtower (#907), The Ruin (#909), and the Store Room (#908)** are described previously as part of the NHL, but the nomination form for the historic district clarifies that the intent of citing these structures in their current location was to provide “a view platform which would enable visitors to see into the canyon in both directions from [a sharp bend in the Colorado River], look out over the dramatic Painted Desert east of the Colorado River, and also look out over the rise to the south and the vast Tusayan forest of pinyon, juniper and ponderosa pine stretching away to the southwest toward the distant blue cones of the San Francisco Peaks on the horizon” (NPS 1994).
- **Old Bookstore (building #41):** This concrete building with rubble stone veneer and a parapet roof was built by the Santa Fe Railway in 1941 and originally served as men's and women's restroom and later as visitor contact station.
- **Search and Rescue/Fire Cache (building #83):** This building was originally a one-bedroom NPS residence which contained one bathroom and a small kitchen. Constructed in 1936, this structure is of wood-frame construction with lap siding, stone chimney, stone foundation, and gabled roof; represents the typical rustic design of the NPS; and is similar to many ranger residences throughout GCNP. The building is currently used as a Search and Rescue/Fire Cache as referred to in this plan.
- **Caretaker's Residence (building #914):** Built as the Fred Harvey Caretaker's Residence, this building is now more commonly referred to as the Caretaker's Residence. This building is a log/wood frame building with a hipped-roof built in 1930 by the railway to serve as a temporary lounge for Fred Harvey Company patrons. It was moved from the canyon rim to its current location in 1934 and was remodeled to serve as a caretaker's residence. It is now used for staff offices. It is the oldest extant building at Desert View.

³ These structures and features include: contributing buildings and features within the Desert View Watchtower Historic District (of which the NHL is also part) (see list of these structures under “Desert View Watchtower Historic District”), the Trading Post (building #1168), the General Store (building #1388), Comfort Stations (building #1410 and building #1559), the Service Station (building #1112), the former visitor center (building #915), a small amphitheater, paved trails leading to and from these structures and features (some of which may date to pre-1933 and others of which were constructed since 2002), a parking lot (built in 2004), a Welcome Shelter and two shade structures along the existing central paved trail (built in 2010), and a telecommunications tower (built in 2008-2010).

- **Shed (building #912):** The shed is a small wood shed with lap siding and gable roof near the caretaker's residence.

Due to changes overtime, the historic district now includes non-contributing features, including: the Trading Post (building #1168; constructed in 1955 and treated as National Register eligible); a small amphitheater (constructed circa 2003-2005); and the Welcome Shelter and two associated shade structures (constructed in 2010-2011). Several buildings and features are outside of but visible from various points within the historic district, including: the General Store (building #1388; constructed in 1983), comfort stations (building #1410, constructed in 1984, and building #1559; constructed in 2000), the Service Station (building #1112; constructed in 1963 and treated as National Register eligible), and the former visitor center (building #915; also known as the Indian Employee Quarters which was constructed circa 1940 and determined ineligible for National Register listing).

Between 2000 and 2010, the NPS also modified circulation patterns in the district. The historic alignment of Desert View Drive (also known as East Rim Drive or Highway 64) and the parking lots were changed, with the road relocated and the parking lots removed. Partial revegetation of the former road and parking lots occurred; a trail was constructed on part of the former road; and the outlines of these historic road and parking features remain in the historic district. There were two parking lots and a large shuttle turnaround constructed in 2004. The Welcome Shelter, two shade structures, and a trail were constructed in 2010-2011.

There are a number of paved and unpaved trails in the Desert View visitor use area. Only one trail, the East Rim Trail, retains integrity. It was constructed in 1933 by the CCC and is being treated as eligible for National Register listing (it is not included in the historic district National Register nomination). Other trails within the district have been modified over the years, with trails being realigned and new trails established.

Today, the historic district retains integrity of location, design, setting, materials, and workmanship, although the integrity of setting and design have been impacted by the addition, removal, and relocation of buildings overtime and changes to the circulation (roads, parking lots, and trails).

Other Cultural Resources

In addition to all contributing and non-contributing buildings within the NHL and historic district, the following building within the APE is also being treated as eligible for National Register listing.

- **The Service Station (building #1112):** This single-story masonry service station was built in 1963 during an expansion of tourism services offered at Desert View aimed at meeting the needs of increased auto-based visitation during the postwar era. In 2016, the SHPO concurred with treating the Service Station as eligible for National Register listing under the Multiple Property Documentation Form "National Park Service Mission 66 Era Resources." Circulation in and out of the Service Station was modified as part of the post 2000 broader circulation changes on-site.

Environmental Consequences

Impacts of Alternative A – No-Action

Direct and Indirect Impacts

No direct or indirect impacts are expected from Alternative A.

Cumulative Impacts

The Desert View Watchtower NHL and Desert View Watchtower Historic District have been impacted previously through building additions and changes to circulation patterns, vegetation patterns, and modifications to the historic landscape, particularly those completed between 2000 and 2010. Modern buildings and structures (e.g., the comfort station (building #1559), Welcome Shelter, and two shade structures) as well as new paved trails have intruded on the setting of the NHL and historic district and have had site-specific, long-term (permanent unless intentionally reversed), negative effects by noticeably modifying the views to and from the NHL and historic district and altering the circulation patterns. The

2000-2010 modifications at Desert View relocated Desert View Drive and the parking lots farther from the canyon rim, the NHL, and the historic district. This increased distance changed visitors' views when first arriving at Desert View, making it very challenging to see the canyon or the Watchtower from the parking lot; previously these views were unimpeded. In addition, the relocated parking lots resulted in the length of trails more than doubling between the parking lots and the Watchtower (from approximately 400 ft to over 1,000 ft in some instances). Other past actions that have impacted cultural resources include primarily internal modifications to many of the National Register eligible structures—including the Old Bookstore (building #41), Search and Rescue/Fire Cache (building #83), Trading Post (building #1168), and Service Station (building #1112), and ongoing deferred maintenance of at least some of these buildings. No present or reasonably foreseeable future actions (beyond ongoing deferred maintenance) would impact the NHL, historic district, or other cultural resources. Collectively these past and present actions have resulted in cumulative negative, if not potentially adverse, impacts on the Desert View Watchtower NHL, Desert View Watchtower Historic District, and other cultural resources. Because no new direct or indirect impacts are expected under the no-action alternative, the cumulative impacts to these resources would continue to be negative and potentially adverse.

Impacts of Alternative B – Preferred Alternative and NPS Proposed Action

Direct and Indirect Impacts

The intent of the preferred alternative is to honor the historic character and use of Desert View while providing a unique location to share the cultures and histories of the traditionally associated tribes of Grand Canyon. In doing so, the NPS believes that this alternative is consistent with the original Santa Fe/Fred Harvey and Colter vision of communicating the ancestral Puebloan architecture and cultures of American Indians of the southwest to visitors at Desert View. Although elements of this alternative have the potential to impact the NHL, historic district, and other National Register eligible/potentially eligible buildings and features, this alternative would have several beneficial effects to these cultural resources by removing some of the non-contributing features that are either in and/or visible from the NHL and historic district, reestablishing and/or rehabilitating some trails and site features such as canyon and Watchtower visibility from the parking lots, and adaptively using some currently under-utilized historic buildings. Given 1) the impacts anticipated from the preferred alternative (as discussed below), 2) the scale and scope of the beneficial impacts (as discussed below), and 3) the NPS intent to design all components so that they are compatible with the NHL and historic district and are consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties, the NPS believes the preferred alternative will have both direct and indirect impacts on-site that will retain the integrity of cultural resources at Desert View. No adverse effects, as defined by 36 CFR 800.5, to cultural resources are anticipated.⁴ However, consultation will continue with tribes and the SHPO, through subsequent design phases of the project, for the final determination of effects to historic properties.

Impacts to the NHL and Historic District

Character of the NHL and Historic District

Under the preferred alternative, the historic character of the NHL and historic district would be beneficially impacted by reestablishing some views *to* and *from* the Watchtower (which is notably within both the NHL and historic district), revegetating denuded areas within the NHL, and rehabilitating the flagstone entrance to the Watchtower.

- The existing former visitor center (building #915) is visible from the upper stories of the Watchtower, and removal of this building—along with the existing central paved trail, Welcome Shelter, and two shade structures that currently obstruct the view of the Watchtower from the

⁴ “Criteria of adverse effect: An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register.” (36 CFR 800.5).

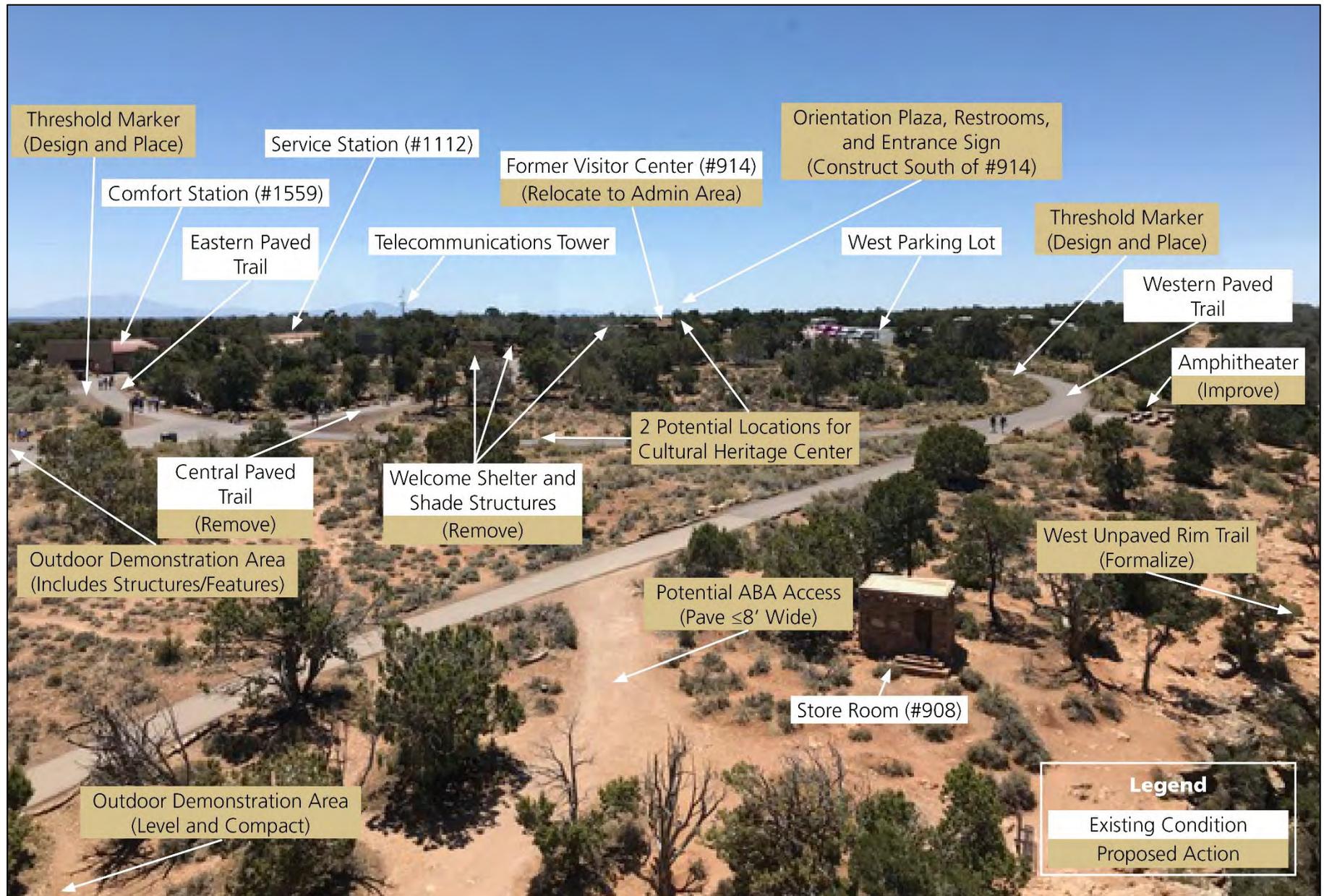
parking lot—would present long-term, beneficial impacts to the viewshed from and to the NHL and historic district. Although the visibility of these existing features from the Watchtower is low (and therefore the benefit to the NHL of removing these structures will be noticeable only to the discerning eye) (see Figure 3.3 on page 35), the mass, height, and orientation of the former visitor center, Welcome Shelter, and shade structures currently restrict views of the Watchtower and canyon from the parking lots. Therefore, their removal is expected to noticeably improve the visibility of the Watchtower from the parking lots, which was once prominent upon arrival at the site. This would reestablish some of the integrity of design, feeling, setting, and association within the southern portion of the historic district. (Prior to the realignment of the road and relocation of parking, the former visitor center was on the south side of the road and therefore did not restrict views of the NHL and historic district upon arrival.)

- Revegetation efforts in areas that are not needed for formalized use would also result in minimal long-term benefits to the NHL as these revegetated areas would contribute to the setting and feeling of the NHL. (The intensity of impact depends on the scale of revegetation which would likely be less than 3,000 sq ft, representing less than half the denuded area.)
- Finally, the flagstone entrance to the Watchtower, a character defining feature of the NHL, would be rehabilitated, resulting in a permanent, beneficial impact on this cultural resource as it would reestablish the design and association of this feature.

Despite these beneficial impacts, the character of the NHL and historic district would be impacted in perpetuity by the addition of several features within, and south of, these properties. The viewsheds and circulation on-site (which were previously altered by trail and road realignments and the relocation and expansion of parking) would be modified, to varying degrees, by installation of an orientation plaza and waysides, restrooms, and an entry sign; improvements to the amphitheater; the addition of threshold markers and replacements of existing benches and other features; the possible addition of paved ABA trails within 300 feet of the Watchtower; and the proposed cultural demonstration spaces next to the Watchtower and near the Old Bookstore (building #41). No additional impacts to the NHL or historic district are anticipated from development of new picnic areas around the parking lots or the potential reuse of the shade structures within these picnic areas as 1) they are outside both the NHL and historic district; 2) there is no visual connection between these areas with the NHL and historic district, and 3) the setting of this area has already been altered.

- Given the location of the proposed orientation plaza, restrooms (both of which would be low-profile), and entry sign, these features may be slightly visible from the uppermost floors of the Watchtower depending on their height and mass. However, their visibility from the NHL and historic district should be minimized by existing vegetative screening and the minimal scale of each building/structure (which would all be shorter than the existing former visitor center whose roof is visible from the uppermost floor of the Watchtower; see Figure 3.3 on page 35). These features are also not expected to impact views to the Watchtower from the parking lots as they would be oriented north-south (parallel to the visitor's orientation) rather than east-west along the northern edge of the parking lot, as existing structures are orientated presently. Similarly, as these features would be designed in accordance with the Secretary of the Interior's Standard for the Treatment of Historic Properties, they are expected to be compatible with and not detract from the historic character of the NHL and historic district.
- While the amphitheater improvements and the addition of threshold markers would be scaled appropriately and constructed of natural materials that are compatible with the NHL and historic district, the threshold markers could be sited within the historic district and would likely be visible from the Watchtower. However, this impact is expected to be minimal given the distance to the Watchtower (approximately 400 ft) and scale and design of the markers that would be designed using the Secretary of the Interior's Standards for the Treatment of Historic Properties to ensure

FIGURE 3.3: CURRENT VIEW (WITH PROPOSED CHANGES) TO THE SOUTHWEST FROM THE DESERT VIEW WATCHTOWER. NPS PHOTO.



compatibility with these resources. These markers would also be sited so views from the ground to the Watchtower are not impacted.

- Should parallel paved ABA trails be necessary to provide ABA accessibility at the northernmost part of the site (within the NHL), the NPS would add up to 500 ft (up to eight ft wide) of asphalt pavement on the site, all of which would be within the boundaries of the NHL and historic district and would be within a few hundred feet of the Watchtower. These parallel ABA paved trails would therefore be visible from the Watchtower and could negatively impact the setting and feeling of the NHL and historic district by adding a more modern feature within the viewshed from the Watchtower. These new trails would have the same appearance as the other paved trails in the NHL.

In addition to visual impacts, the proposed asphalt paved ABA trails could modify the circulation on-site, particularly if additional, parallel paved trails are constructed. Modifying the alignment of the existing paved trails would require far less pavement and would only slightly modify circulation on-site, whereas the addition of parallel ABA paved trails would provide an alternate access route to the Watchtower than what has historically existed and would therefore modify how visitors—particularly those with physical limitations—approach and experience the Watchtower. Despite the seemingly disparate impacts of these two options, neither would result in adverse impacts to the NHL or historic district as this circulation has previously been modified and the existing trails do not retain integrity. Historical images and drawings show that the existing trails had slightly different configurations during the period of significance for the historic district.

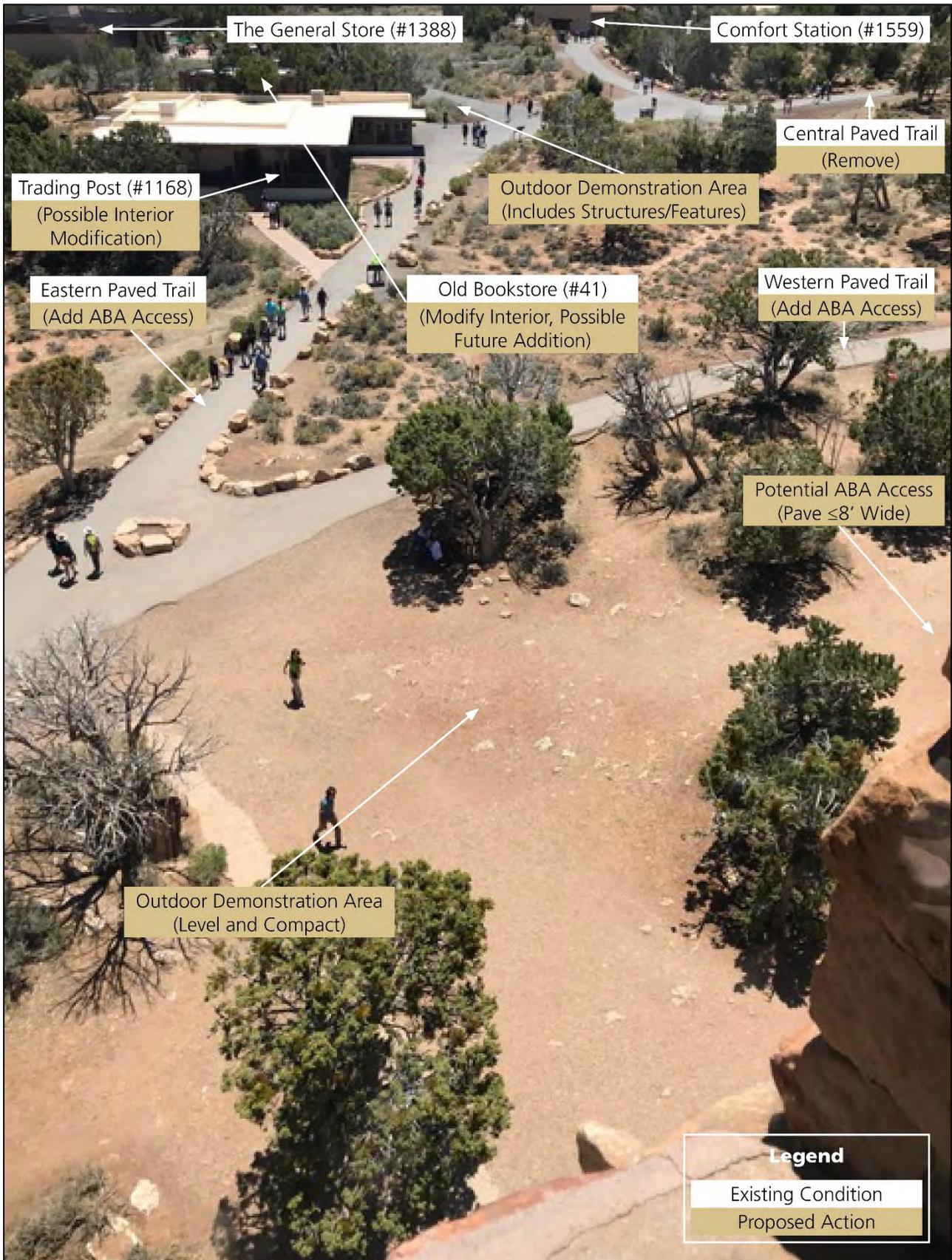
- The development of both cultural demonstration spaces has the potential to impact the design and setting of the NHL and historic district as they would introduce new features and modify land use within these specific areas. However, neither development would adversely impact the integrity of the NHL or historic district given adherence to the Secretary of the Interior's Standards for the Treatment of Historic Properties in designing these spaces as well as the design intent of bringing visitors into this landscape to experience native culture and the canyon itself (considered consistent with Colter's vision for Desert View).

Given the lack of existing vegetation immediately south of the Watchtower, the area's relative flat slope, and the minimal work required to develop a cultural demonstration space adjacent to the Watchtower (e.g., removal of subsurface rocks that stick above ground and little grading of the surface), there would be little long-term visual change on-site from the addition of a cultural demonstration space next to the Watchtower except for the removal of some rocks on the surface and the placement of some of the seating stones (see Figure 3.4 on page 37).

The outdoor demonstration space proposed near the Trading Post (building #1168) and Old Bookstore (building #41) would include some built structures/features which could impact views to and from the Watchtower. Given that the area is approximately 400 ft from the Watchtower and the Trading Post (building #1168) blocks the view from the Watchtower to most of this this proposed developed area, these built elements are not expected to be highly visible from the Watchtower. However, shade ramadas and interpretive signage have the potential to block some views from the outdoor demonstration space toward the Watchtower, depending the height and scale of these features. As the NPS would adhere to the Secretary of the Interior's Standards for the Treatment of Historic Properties when designing this outdoor cultural demonstration space, any impacts to historic character of the area would not amount to an adverse effect on the NHL or historic district and these resources would retain their overall integrity and would remain eligible for listing on the National Register.

- This alternative could also include the removal or modification of short paved trails (approximately 100 ft or less) that are within the former alignment of East Rim Drive and the original crescent-shaped parking lot. Any areas where the trails were removed from this vicinity would be revegetated with native vegetation, but few to no trees would be planted. As a result, even though visitor

FIGURE 3.4: CURRENT VIEW (WITH PROPOSED CHANGES) TO THE SOUTHEAST FROM THE DESERT VIEW WATCHTOWER. NPS PHOTO.



circulation would no longer occur in these areas, the original footprints of the drive and parking lot would remain visible, similar to that of the former parking lot. These modifications could allow reestablishment of the visual connection from the former parking area to the canyon rim and Watchtower.

Ultimately, while the features listed above could all be, at least partially, visible in the foreground *from* the NHL and historic district, the character-defining views *from* the Watchtower toward the Grand Canyon, Painted Desert, and San Francisco Peaks would remain, and views toward the Watchtower would be somewhat reestablished from the removal of non-contributing features. Similarly, any changes in circulation would not result in measurable impacts to the integrity of the NHL nor historic district as the circulation features that would be affected currently lack integrity. And finally, through appropriate design, massing, and scale of the new infrastructure, the historic character of the NHL and historic district would be retained, if not improved from the removal of features that are not compatible with either the NHL or historic district.

Buildings and Other Features within the NHL and/or Historic District

No direct modifications would be made to the following historic buildings under this alternative: the Desert View Watchtower (building # 907), the Ruin (building #909), Store Room (building #908), Caretaker's Residence (building #914), Shed (building #912), or the Service Station (building #1112).

The only potential direct impacts to buildings that are contributing to the historic district include interior modifications to the Old Bookstore (building #41; previously modified from its' original use as a restroom)—related to its use as an *interim* Cultural Heritage Center—and the Search and Rescue/Fire Cache (building #83; previously modified from its' original use as a residence). As the interiors of both buildings have been altered previously, continued interior modifications of these buildings, especially as they would be completed in adherence to the Secretary of the Interior's Standards for the Treatment of Historic Properties, are not expected to affect these historic properties nor alter any character defining features. The proposed external modifications to the Old Bookstore (building #41), such as replacement of the membrane roof, are also not anticipated to alter any character defining features of this building as the roof would be replaced in kind. These modifications, particularly related to the roof, would result in a long-term beneficial impact to the Old Bookstore (building #41) by addressing deferred and necessary maintenance and increasing the utilization of this building into the future. (Notably, the Old Bookstore (building #41) could be additionally impacted by the preferred alternative should the NPS pursue a building addition and transform this building into the formal Cultural Heritage Center. Please see below for a discussion on these potential impacts.)

Trading Post

Potential modifications to the Trading Post (building #1168) would occur only if this building were selected to function as the Cultural Heritage Center in the future. Please see discussion below on the impacts related to the various options for the Cultural Heritage Center.

East Rim Trail

The formalization of the east unpaved rim trail by leveling the trail tread and removing trip hazards may result in increased pedestrian traffic and associated impacts (e.g., trail widening from foot traffic if not contained, removal or relocation of rocks that line the trail), but overall, this historic resource is expected to experience permanent beneficial impacts under the preferred alternative as the physical, character-defining, features of this trail (e.g., stone lining and drainage features)—which have otherwise been left to the elements—would be rehabilitated and social trailing that occurs in the area presently would be reduced.

Impacts to Other Cultural Resources

Service Station

This alternative would remove the vehicular barrier between the eastern parking lot and access road for the Service Station (building #1112) and shuttle turn. As these features were designed post 2000 and are not original to the site, modifying the entrance to the Service Station (building #1112) would not alter the character defining features of this building. Therefore, the NPS does not anticipate that this would impact the building or the building's integrity as a cultural resource.

Impacts from Potential Cultural Heritage Center Options on All Cultural Resources

The location and development of a Cultural Heritage Center would have variable impacts on the NHL, historic district, and potentially the Old Bookstore (building #41) and Trading Post (building #1168) depending on its location, setting, materials, form, and size.

- Should this future building be sited outside the historic district, near the existing location of the former visitor center (building #915) (option 1 in the preferred alternative), the roof may be slightly visible from the Watchtower, similar to the current level of visibility of the former visitor center. As a result, it is anticipated that there would be little to no impacts to the character defining features of the NHL and the historic district at this location as the structure, while visible in the foreground, would not obstruct views of the San Francisco Peaks and the design of such a building would be compatible with the Secretary of the Interior's Standards for the Treatment of Historic Properties.
- Locating the Cultural Heritage Center as an addition to the Old Bookstore (building #41) (option 2 in the preferred alternative) would alter, if not remove one exterior wall (one quarter of the exterior face) of this historic resource (notably, the primary face of the building would be retained), and would slightly alter the historic setting and feeling of the building by adding a feature adjacent to the structure that would change the mass, scale, and appearance of the building as visitors approach the area from the south. However, these negative impacts would not amount to an adverse effect on the building as the NPS would adhere to the Secretary of the Interior's Standards for the Treatment of Historic Properties when designing any addition. The addition would also partially serve the purpose of adaptive reuse for this building which could serve to protect the structure in the long-term (in perpetuity) as the building would be more likely to receive ongoing maintenance and protection.
- In comparison, should the NPS convert the Trading Post (building #1168) into a Cultural Heritage Center (option 3 in the preferred alternative), only internal modifications are anticipated. Since the interior of the Trading Post has been modified several times previously and the NPS would adhere to the Secretary of the Interior's Standards for the Treatment of Historic Properties when making any modifications, any additional internal modifications are not anticipated to impact the character-defining features of this building and no additional impacts to this building, beyond existing conditions, would occur.

Cumulative Impacts

Past, present, and future actions that have and would impact the Desert View Watchtower NHL, Desert View Watchtower Historic District, and other cultural resources at Desert View would be the same as described under Alternative A.

As previously described in this EA, the direct and indirect impacts of Alternative B would beneficially remove some of the modern features that are not compatible with the NHL and historic district, reuse—to a greater degree—at least two historic buildings, rehabilitate the East Rim Trail, and ultimately increase tribal presence on-site, as consistent with Colter's vision of communicating the ancestral Puebloan architecture and cultures of American Indians of the southwest to visitors at Desert View. While the addition of features such as signs, picnic areas, an orientation plaza and restrooms, cultural demonstration spaces, and potentially new or realigned trails would add new features to the site and contribute to visual "clutter", and a potential addition to the Old Bookstore would modify the exterior of the structure, these direct and indirect negative impacts to the viewshed, circulation, and other cultural resources would not adversely affect the integrity of cultural resources on-site. That said, when the effects of this alternative are combined with other past, present, and reasonably foreseeable future impacts, the total cumulative impact on the NHL, historic district, and other cultural resources would continue to be consequential (as they impact the integrity of these resources) and negative, if not adverse. The preferred alternative would add some new features, modify existing features, and incrementally reverse some of the negative impacts to the NHL, historic district, and other cultural resources (e.g., rehabilitating the east rim unpaved trail), but it would not fully restore the integrity of the NHL, historic district, and other cultural resources from past actions and would not substantially change the impacts that have already occurred and are ongoing.

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Chapter 4 - Consultation and Coordination

LIST OF AGENCIES AND TRIBES CONSULTED

The following American Indian tribes and agencies were contacted and were invited to participate in the planning process:

Government to Government Consultation with American Indian Tribes

- Havasupai Tribe
- Hopi Tribe
- Hualapai Tribe
- Kaibab Band of Paiute Indians
- Las Vegas Tribe of Paiute Indians
- Moapa Band of Paiute Indians
- Navajo Nation
- Paiute Indian Tribe of Utah
- Pueblo of Zuni
- San Juan Southern Paiute Tribe
- Yavapai-Apache Nation

Agency Consultation

- United States Fish and Wildlife Service
- Arizona State Historic Preservation Officer

References

- Grand Canyon National Park (GCNP). 2007. Memorandum of Agreement Regarding Collections, Inadvertent Discovery, and Intentional Excavation of American Indian Human Remains, Funerary Objects, Sacred Objects, and Objects of Cultural Patrimony at Grand Canyon National Park, Arizona.
- Grand Canyon National Park (GCNP). 2018. Archaeological Site Database and GIS data. Cultural Resource Program, Grand Canyon National Park.
- National Park Service, US Department of the Interior (NPS). n.d. National Park Service Visitor Use Statistics. “Annual Park Recreation Visitation 1904-Last Calendar Year for Grand Canyon National Park”. 15 March 2018.
[https://irma.nps.gov/Stats/SSRSReports/Park%20Specific%20Reports/Annual%20Park%20Recreation%20Visitation%20\(1904%20-%20Last%20Calendar%20Year\)?Park=GRCA](https://irma.nps.gov/Stats/SSRSReports/Park%20Specific%20Reports/Annual%20Park%20Recreation%20Visitation%20(1904%20-%20Last%20Calendar%20Year)?Park=GRCA).
- NPS. 1987. National Register of Historic Places Inventory-Nomination Form – M.E.J. Colter Buildings.
- NPS. 1991. Natural Resources Management Guideline, NPS-77. Washington DC.
- NPS. 1994. National Register of Historic Places Registration Form – The Desert View Watchtower Historic District.
- NPS. 2002. Environmental Assessment for Desert View Improvements and Road Rehabilitation. Grand Canyon National Park, Coconino Country, Arizona.
- NPS. 2009. National Park Service Cultural Landscapes Inventory Professional Procedures Guide. Washington, DC.
- NPS. 2015. National Park Service NEPA Handbook.

Appendix A – Photos of Historic and Current Conditions at Desert View



Project Area Overview





Panoramic View of Desert View area from Watchtower, ca. 1942. Photo shows the redesigned loop, parking area, and pathways leading to the Watchtower. The work was completed between August 1941 and September 30, 1942. (Grand Canyon Museum Collection, Accession #8450 and #8452) (as found in Desert View Cultural Landscape Inventory, Oculus, 2003)



Panoramic View of Desert View area from an aerial drone, 2018. Photo shows the relocated and expanded parking areas and modern circulation at Desert View which were modified in 2004. NPS Photo.



Historic Image of the Shed (building #912). Photo submitted as part of the National Register of Historic Places Registration Form for the Desert View Watchtower Historic District.



2018 Image of the Shed (building #912). NPS Photo.



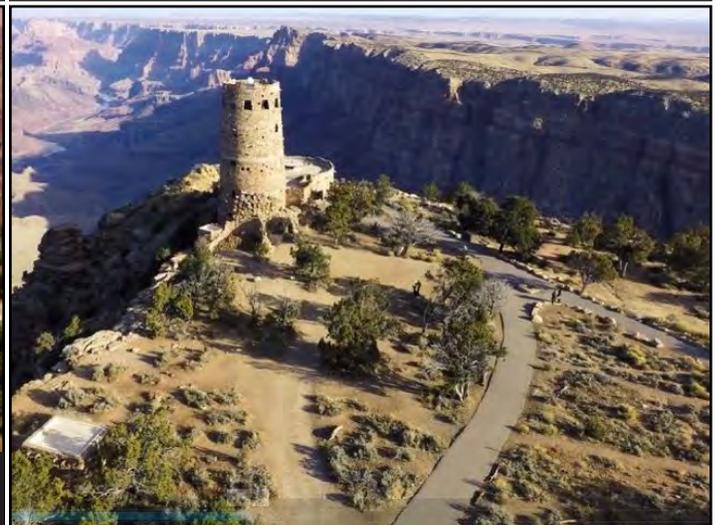
2018 Image of the Trading Post (building #1168). NPS Photo.



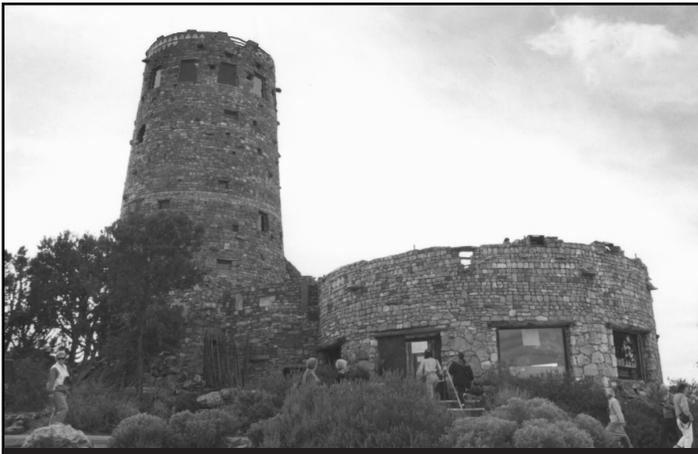
2018 Image of the Service Station (building #1112). NPS Photo.



Postcard aerial view of Desert View Watchtower, Trading Post, and visitor parking area. Taken by Petley Studios, Phoenix, Arizona, ca.1957. Grand Canyon Museum Collection, Accession #8456.



2018 Aerial Image of the Watchtower. NPS Photo.



Historic Image of the Watchtower (building #907). Photo submitted as part of the National Register of Historic Places Registration Form for the Desert View Watchtower Historic District.



2018 Image of the Watchtower (building #907). NPS Photo.



Historic Image of The Store Room (building #908). Photo submitted as part of the National Register of Historic Places Registration Form for the Desert View Watchtower Historic District.



2018 Image of The Store Room (building #908). NPS Photo.



Historic Image of The Ruin (building #909). Photo submitted as part of the National Register of Historic Places Registration Form for the Desert View Watchtower Historic District.



2018 Image of The Ruin (building #909). NPS Photo.



Historic Image of the Old Bookstore (building #41). Photo submitted as part of the National Register of Historic Places Registration Form for the Desert View Watchtower Historic District.



2018 Image of the Old Bookstore (building #41). NPS Photo.



Historic Image of the SAR/Fire Cache (building #83). Photo submitted as part of the National Register of Historic Places Registration Form for the Desert View Watchtower Historic District.



2018 Image of the SAR/Fire Cache (building #83). NPS Photo.



Historic Image of the Caretaker's Residence (building #914). Photo submitted as part of the National Register of Historic Places Registration Form for the Desert View Watchtower Historic District.



2018 Image of the Caretaker's Residence (building #914). NPS Photo.