
National Park Service
Cultural Landscape Inventory
April 2013



Cross Canyon Corridor Historic District
Grand Canyon National Park

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Inventory Unit Summary and Site Plan

Inventory Unit

Cultural Landscape Inventory Name: Cross Canyon Corridor Historic District

Cultural Landscape Inventory Number:

Parent Cultural Landscape Inventory Name: Grand Canyon National Park Landscape

Parent Cultural Landscape Inventory Number: 85011

Park Name: Grand Canyon National Park

Park Alpha Code: GRCA

Park Org Code: 8210

Landscape/Component Landscape Description:

This document constitutes a Cultural Landscape Inventory (CLI) for the Cross Canyon Corridor Historic District (District), a component landscape of Grand Canyon National Park (GRCA). For the purposes of this CLI, the component landscape is further divided into ten contiguous

Landscape Areas:

- Bright Angel Trail Landscape Area
- Indian Garden Landscape Area
- Colorado River Trail Landscape Area
- Phantom Ranch Landscape Area
- South Kaibab Trail Landscape Area
- Yaki Point (South Kaibab Trailhead) Landscape Area
- North Kaibab Trail Landscape Area
- Bright Angel Campground Landscape Area
- Cottonwood Campground Landscape Area
- Roaring Springs Landscape Area

The period of significance for the Cross Canyon Corridor Historic District is from AD 1891 to 1942.

The information for the Cross Canyon Corridor Historic District contained herein was developed from research and two field visits which were completed in 2009 and 2011. The information for the Bright Angel Trail Landscape Area, the Indian Garden Landscape Area, and the Colorado River Trail Landscape Area were adapted from the Bright Angel Trail Corridor (BAT) CLI prepared by Logan Simpson Design Inc. (LSD) in 2010. Information regarding the Indian Garden Landscape Area contained in the BAT CLI was derived from the *Indian Garden Cultural Landscape Report*, prepared in June 2005 by John Milner Associates, Inc. (JMA). In addition, basic information about the Cross Canyon Corridor Historic District as well as the Landscape Areas contained within it has been incorporated from existing National Register Nominations for the Cross Canyon Corridor Historic District, the North Kaibab Trail, the South Kaibab Trail, the Bright Angel Trail, and the Colorado River Trail, as well as a multiple property listing for historic trails and roads in the Grand Canyon (Anderson et al. 2008). The Cross Canyon Corridor Historic District nomination was prepared by the Denver Service Center of the National Park Service (NPS) in 1980. GRCA trails historian, Mike Anderson, and others prepared individual nominations for the trails in 1991 and 1992 and subsequently revised them in 2002 and 2010.

BRIGHT ANGEL TRAIL LANDSCAPE AREA

The Bright Angel Trail is approximately 7.8 miles in length and traverses almost 4,800 feet of elevation change from the South Rim of the Grand Canyon to the Colorado River. Before reaching the Colorado River, the Bright Angel Trail intersects with the Colorado River Trail which continues 1.8 miles to its terminus at Phantom Ranch. From its inception, the trail has functioned as a transportation corridor for Native Americans, miners and prospectors, North and South Rim residents, and recreationists. For this reason, it remains the GRCA's most traveled trail and is considered the safest because of its regular maintenance and facilities that supply shade, potable water, and emergency phones, and a consistent ranger presence.

While Niles Cameron, Pete Berry and others are credited with initially "building" the Bright Angel Trail in 1890 to access mining claims in the inner Grand Canyon, the men quickly realized the true worth of their efforts would be better realized by soliciting the tourism trade and charging a toll for visitation. The use of the trail as a "toll road" became the source of much controversy and subsequent legal battles with railroad companies and the Federal Government in the early 1900s. The outcome of the legal battle resulted in the trail being deeded to the NPS in 1928. In the 1930s, the trail was extensively improved by enrollees of the Civilian Conservation Corps (CCC), resulting in the trail alignment and most of the amenities of the trail as they appear today.

Contributing resources of the Bright Angel Trail Landscape Area include CCC-era built features of the trail, such as its native stone rest houses, retaining walls, steps, and the Trans-canyon Telephone Line, as well as the alignment of the trail itself. For the most part, the present-day alignment of the Bright Angel Trail and its associated features were built between 1929 and 1939. CCC reconstruction efforts along the trail during the 1930s likely removed most, if not all, of the earlier trail features built during Cameron's initial development of the trail.

On-going maintenance and repairs of the trail and its associated features during post-period of significance projects has not affected its integrity. The overall condition of the Bright Angel Trail Landscape Area remains much as it was during the period of significance and its physical condition is considered to be fair.

The period of significance for the Bright Angel Trail Landscape Area is 1891 to 1942. According to National Register of Historic Places (NRHP) criteria, the Bright Angel Trail Landscape Area is significant at the national level under Criteria A, B, and C. Under Criterion A, the Bright Angel Trail is significant within the areas of Recreation and Tourism and Politics/Government, and for the landscape's association with the CCC. The Bright Angel Trail is significant under Criterion B because of its association with Arizona entrepreneur and politician, Ralph Henry Cameron. It is also significant under Criterion C, within the area of Architecture, for its collection of NPS Rustic-style buildings.

INDIAN GARDEN LANDSCAPE AREA

Indian Garden is located approximately 4.5 miles along the Bright Angel Trail and can also be accessed by the Tonto Trail from the Hermit and Monument Creek areas to the west and the South Kaibab or Horseshoe Mesa areas from the east. For over 100 years, the site of Indian Garden has been used as a stopping point for hikers, campers, and mule riders, although its fertile landscape of creeks, springs, and seeps was used by Native Americans and miners for many years prior to the start of tourism (JMA 2005, I-1).

Indian Garden is a palimpsest whose earlier traces of history are still faintly visible in today's multi-layered landscape. Whether ensuing generations of management and design were based on legal negotiations, the need to rebuild due to flood damage, or the necessity of enhancing facilities for an ever-growing number of visitors, Indian Garden has been a model of how to keep pace with change. The issues that face Indian Garden most often are those that involve mitigation of water—an element that is both welcome as a source of refreshment, but is also a source of

apprehension when flash floods rush through the landscape. Throughout history, it is water that has both drawn people to this site and shaped the form and appearance of the cultural landscape seen today.

The JMA CLR team identified the period of significance for Indian Garden as beginning in 1903 and extending through 1943. 1903 marks the year when Ralph Cameron began his tourism facilities at Indian Garden in earnest. 1943 marks the end of CCC involvement at Indian Garden and the final implementation of NPS Rustic-style design aesthetics within the landscape. Within this overall period of significance are two sub-periods: from 1903 until 1927, marking the years of Ralph Cameron's influence at Indian Garden, and 1928 until 1943, marking the years of NPS and CCC influence upon the site.

After evaluating Indian Gardens according to the NRHP's seven aspects of historic integrity, the JMA CLR team found that Indian Garden does not retain integrity as an individual District. This finding was based on the fact that Indian Garden has undergone considerable alterations since the period of significance. These changes have impeded Indian Garden's ability to convey its historical significance and importance within American history. For this reason, Indian Garden is not individually eligible for listing in the NHRP as a District or a site. Portions of the landscape, however, including all contributing resources, were included in the Bright Angel Trail Corridor National Register nomination and should also be included in the Cross Canyon Corridor National Register nomination so they are preserved and protected as part of the park's management plans. Historic areas within the Indian Garden Landscape Area consist of the Bright Angel Trail, Day Use Area, Pump Station and Corral Area, and North Indian Garden Area.

The overall condition of the Indian Garden Landscape Area portion of the component landscape is considered to be fair.

Although Indian Garden may not retain integrity sufficient for NRHP eligibility, it is still an important historic landscape within the Cross Canyon Corridor Historic District. According to guidelines provided by the NHRP, Indian Garden draws its significance in American history under Criteria A, B, and C. Under Criterion A, Indian Garden is significant within the areas of Recreation and Tourism, for the landscape's association with tourism-related activities, and Politics/Government, and for the landscape's association with the CCC. Indian Garden is significant under Criterion B because of its association with Arizona entrepreneur and politician, Ralph Henry Cameron. Indian Garden is also significant under Criterion C within the area of Architecture, for its collection of NPS Rustic-style buildings.

PHANTOM RANCH LANDSCAPE AREA

Phantom Ranch is located on the north side of the Colorado River approximately 4,600 feet below the North Rim. The Phantom Ranch Landscape Area is accessed from the North Rim by means of the North Kaibab Trail; the South Rim by means of the South Kaibab Trail; and from the Bright Angel and Colorado River Trails. The Colorado River Trail extends north across the Colorado River and Silver Bridge and connects to an ancillary trail which passes through the Bright Angel Creek delta and ends to the north of the Rock House Bridge. The Phantom Ranch Landscape Area currently encompasses 29.5 acres and is comprised of two principle areas of development. The first area consists of the tourist facilities and NPS and Fred Harvey Company support buildings located east of the Bright Angel Creek adjacent to the North Kaibab Trail. The second area includes numerous buildings and structures constructed by the United States Geological Survey (USGS) and NPS to the north of the Silver Bridge within the Bright Angel Creek delta on the Colorado River. The boundary also includes one site—the stabilized ruins of the Bright Angel archeological site—and two structures—a grave (#55624) and memorial plaque (#57228) for deceased NPS trail foreman Rees B. Griffith. The site and structures are located north of the Kaibab Suspension Bridge (Black Bridge) near the southern terminus of the North Kaibab Trail.

The Phantom Ranch area originally served as Rust's Camp, a small outpost and tent camp operated by Utah entrepreneur David Rust between 1906 and 1910. In 1913, the camp was renamed Roosevelt's Camp after President Theodore Roosevelt stayed at the site, having found it vacant during a hunting trip. In 1921, the area was acquired by the Santa Fe Railroad (SFRR) and the Fred Harvey Company, who spent \$20,000 on the construction of a new lodge for inner canyon tourists. This development, which was later known as Phantom Ranch, contained three guest cabins, a lodge, and a caretaker's cabin designed by noted Fred Harvey Company architect, Mary Elizabeth Jane Colter. In the late 1920s, and again in the 1930s, the ranch was expanded by the Fred Harvey Company and SFRR due to increased visitation. Beginning in 1933, the CCC made numerous improvements to the area, including the construction of a swimming pool, which has since been removed, and other buildings and structures that remain intact as contributing resources to the Phantom Ranch Landscape Area. Today, a total of 38 buildings and structures are present at Phantom Ranch. With the exception of 5 buildings (the 4 Hiker Dorms and Phantom Ranch Ranger Station) and one structure (the Harvey Mule Barn), all of the resources were constructed between 1922 and 1936 by the Fred Harvey Company, the NPS, and the CCC during the period of significance.

Development of the Bright Angel Creek delta within the Phantom Ranch Landscape Area began in the fall of 1922, when the USGS erected a small residence and river gauging equipment along the north bank of the Colorado River. Beginning in 1933, the CCC made numerous improvements to the area, including the construction of a mule corral, two small residences, and a small bridge, as well as the installation of a cable tramway to the west of the Bright Angel Creek delta as a means of gathering wood from a sandbar on the far side of the Colorado River. Development of the area ceased in 1941 following the cessation of the CCC program, and remained stagnant throughout the 1950s. Following the completion of the Silver Bridge in the late 1960s, an unnamed spur trail was built through the area which provided hiker access from the Colorado River Trail to the North Kaibab Trail and Phantom Ranch.

Contributing resources of the Phantom Ranch Landscape Area include 24 buildings and 7 structures within the Bright Angel Creek delta and Phantom Ranch locations. Buildings constructed by the Fred Harvey Company consist of 11 guest cabins (#55563–55565 and 55567–55574), a wrangler's cabin (#55556), a welcome corral (#55621), an employee bunkhouse (#55561), a shower house (#55962), a manager cabin (#55566), a dining hall (#55575), restrooms (#55576), and an employee cabin (#665450). Contributing resources constructed by the NPS and CCC include a mule barn (#9451), the River Ranger station (#55420), the Rock House (#55437), a residence (#55557), and a bunkhouse (#55560). Contributing structures include a water reservoir (#55578), the Rock House Bridge abutments (#55622), four stone sewer line pylons (#57212), numerous lamp posts (#57215), an in-use section of the NRHP-listed Trans-canyon Telephone Line (#55623), and an outdoor fireplace (#57213). The remaining structures—a Trans-canyon Telephone Line Plaque (#57227) and a Rees B. Griffith Memorial Plaque (#57228)—also considered contributing structures although they were installed outside the period of the significance in the 1980s and 1990s.

The period of significance for the Phantom Ranch Landscape Area is 1906 to 1942. According to the NRHP criteria, the Phantom Ranch Landscape Area is significant at the national level under Criteria A and C. Under Criterion A, Phantom Ranch is significant within the areas of Recreation and Tourism, and for the landscape's association with the CCC. Under Criterion C, Phantom Ranch is significant within the area of Architecture, for its collection of NPS Rustic-style buildings, as well as its association with renowned Fred Harvey Company architect, Mary E. J. Colter.

Although flooding of the Colorado River, modern maintenance and repairs, increased visitation and tourist demands, and the installation of new facilities has altered the overall setting and design of the landscape, the Phantom Ranch Landscape Area remains much as it was during the period of significance. The area remains one of the most popular destinations at GRCA and continues to serve as a respite for hikers and tourists traveling along the inner canyon corridor trails. Despite the area's remote location, the overall physical condition of the Phantom Ranch

Landscape Area and its associated buildings and structures are considered to be good, in part due to the diligence of the Park's current concessioner--Xanterra Parks and Resorts—and NPS staff.

SOUTH KAIBAB TRAIL LANDSCAPE AREA

The South Kaibab Trail is approximately 6.4 miles in length and traverses approximately 4,740 feet of elevation change from the South Kaibab Trailhead near Yaki Point on the South Rim to the Colorado River. From its inception, the trail has functioned as a transportation corridor for NPS and Fred Harvey Company employees and recreationalists. The trail was built by the NPS between 1924 and 1925 to provide direct, year-round access to the inner canyon and Phantom Ranch area, and remains today as the GRCA's shortest route from the South Rim to the Colorado River. Constant sun exposure keeps most of the trail free from snow and ice throughout the winter months, but is known to be quite harsh during the summer due to a lack of water and shade along the trail. Despite its unforgiving nature, the near-ridgeline descent of the trail exposes hikers to panoramic views that attract warm season users throughout the year.

The South Kaibab Trail was first envisioned by NPS officials in the early 1920s as an alternate route to the Bright Angel Trail to access the Colorado River and inner canyon. The NPS originally intended to purchase the Bright Angel Trail from Coconino County, who had become its owner in 1920, but were unable to gain control of the trail when negotiations between the two parties were defeated by voters in 1924. Acknowledging that this was a possible outcome, the NPS had already surveyed and set up funding for a secondary route that extended from Yaki Point on the South Rim to the south bank of the Colorado River. The NPS began construction of the trail in 1924, shortly after the sale of the Bright Angel Trail was rejected. Construction of the trail took six months, and on June 15, 1925, the alignment was dedicated as the Kaibab Trail. The trail was improved by the CCC, who built numerous structures along the route between 1933 and 1939.

Contributing resources of the South Kaibab Trail Landscape Area include the NPS-constructed trail itself, as well as its built features which include retaining walls and steps. The majority of these features were constructed by NPS trail crews between 1924 and 1925. Contributing features associated with CCC improvements to the trail include the Cedar Ridge fossil fern exhibit (#9450), retaining walls, steps, interpretative signs, and a segment of the NRHP-listed Trans-canyon Telephone line (#55623). All of these features were constructed by CCC enrollees stationed at the Bright Angel Campground between 1933 and 1939.

The period of significance for the South Kaibab Trail Landscape Area is 1907 to 1939. According to NRHP criteria, the South Kaibab Trail Landscape Area is significant at the national level under Criteria A and C. Under Criterion A, the trail is significant within the areas of Recreation and Tourism and Politics/Government, and for the landscape's association with the CCC. It is also significant under Criterion C, within the area of Engineering, for its significant engineering accomplishments.

Similar to other inner canyon trails at GRCA, the South Kaibab Trail and its associated features have required substantial on-going maintenance and repairs post-period of significance. These changes to the trail have not, however, affected the integrity of the trail. The overall physical condition of the South Kaibab Trail Landscape Area is considered to be good. The trail has been altered minimally and remains much as it was during its period of significance.

YAKI POINT (SOUTH KAIBAB TRAILHEAD) LANDSCAPE AREA

The Yaki Point (South Kaibab Trailhead) Landscape Area is located on the South Rim of the Grand Canyon, approximately 3.0 miles east of Grand Canyon Village. Accessible via shuttle bus only, the area is named after an overlook which is located on a separate promontory and offers unique views of the canyon. Both the Yaki Point (South Kaibab Trailhead) Landscape Area and Yaki Point overlook are located along East Rim Drive (also known as Desert View Drive); the

road to the South Kaibab trailhead branches from the main alignment of the route which continues on to the Yaki Point overlook.

Since the completion of the South Kaibab Trail in 1925, the Yaki Point (South Kaibab Trailhead) Landscape Area has functioned as a staging area for pack trains delivering supplies to the Phantom Ranch area. The NPS and the Fred Harvey Company constructed buildings and corrals in the area in 1926 and 1927 for this general purpose, and the U.S. Army's Seventh Pack Train was stationed there during the 1930s to supply CCC efforts at the GRCA. Yaki Point continues to serve as a staging point at the top of the South Kaibab Trail.

The period of significance for the Yaki Point (South Kaibab Trailhead) Landscape Area is from 1925 to 1942. According to the NRHP criteria, the Yaki Point Landscape Area is significant at the national level under Criteria A and C. Under Criterion A, Yaki Point (South Kaibab Trailhead) is significant within the areas of Recreation and Tourism, and for its association with tourist-related activities at GRCA, and for the landscape's association with the CCC. It is also significant under Criterion C for the various buildings constructed in the late 1920s, which are quality examples of the NPS Rustic architectural style.

The Yaki Point (South Kaibab Trailhead) Landscape Area currently encompasses 6.2 acres. Contributing resources within the Yaki Point (South Kaibab Trailhead) Landscape Area include the Fred Harvey Mule Barn (#55618), the Fred Harvey Residence (#56902), two sheds (#56903 and 56756), the NPS Residence (#57284), the NPS Garage (#57260), and two cisterns associated with the Fred Harvey Mule Barn (#57306) and Residence (#57307). These buildings were constructed by the Fred Harvey Company and the NPS between 1926 and 1929. The buildings have changed little since their original construction and most are considered to be in good to fair condition.

NORTH KAIBAB TRAIL LANDSCAPE AREA

The North Kaibab Trail is approximately 14.5 miles in length and traverses approximately 5,841 feet of elevation change from the North Rim of the Grand Canyon to its terminus at the south end of the Kaibab Suspension Bridge at the Colorado River. For hundreds of years, this general route along Bright Angel Fault functioned as a transportation corridor for Native Americans. Beginning in the late 1800s, it also served as an access route into the canyon for prospectors, surveyors, hunters, North Rim cattleman and residents, and recreationists. Completion of the trail in 1928 created an important linkage from the North Rim to the Colorado River and the South Rim, resulting in a cross-canyon travel corridor. As GRCA's only regularly maintained trail from the North Rim to the Colorado River, the North Kaibab Trail remains an important link for rim-to-rim travel within the park.

USGS surveyor Francois-Emile Matthes was the first to clear a path for what would later become the North Kaibab Trail as he and his party devised a shortcut from the North Rim to the Colorado River in 1902. The following year, Utah entrepreneur David Rust further developed the route in association with a tourist camp that he had established near the present-day location of Phantom Ranch. Ownership of the trail was transferred to the NPS in 1919, when President Woodrow Wilson established GRCA. The trail was improved by NPS between 1919 and 1928, during which time the upper alignment was changed to follow Roaring Springs Canyon instead of Bright Angel Canyon, and the trail was formally designated the North Kaibab Trail. Between 1933 and 1942, the CCC made numerous improvements to the trail, including the construction of spur trails near Roaring Springs and Ribbon Falls.

Contributing resources of the North Kaibab Trail Landscape Area include the NPS-constructed trail itself, as well as its built features, such as retaining walls, and steps. These resources were built predominantly by the NPS between 1919 and 1928. Construction of these features probably removed most, if not all of the trail features built during Rust's initial development of the trail. The

NPS-constructed Kaibab Suspension Bridge, which links the North and South Kaibab Trails at the Colorado River, is also a contributing resource of the North Kaibab Trail Landscape Area.

Contributing resources associated with the CCC include a segment of the Trans-canyon Telephone Line. The NRHP-listed telephone line, which parallels the North Kaibab Trail from the Colorado River to Roaring Springs, was constructed by the CCC in 1935.

The period of significance for the North Kaibab Trail Landscape Area is 1902 to 1941. According to NRHP criteria, the North Kaibab Trail Landscape Area is significant at the national level under Criteria A and C. Under Criterion A, the trail is significant within the areas of Recreation and Tourism and Politics/Government, and for the landscape's association with the CCC. It is also significant under Criterion C, within the area of Engineering, for its significant engineering accomplishments.

Due to topography and run-off into Bright Angel Creek, the North Kaibab Trail requires regular maintenance, especially between Roaring Springs and a landform known as "The Box" in Bright Angel Canyon. Storms continually cause rock slides and other erosional destruction of the path, and because of this, this portion of the trail has undergone a significant amount of change since its inception. Additionally, the trail is subject to on-going maintenance due to the visitor use and the high numbers of recreationists that traverse the route each year. These post-period of significance repairs have not affected the integrity of the trail, however, and the overall physical condition of the trail and its associated features remain in good condition.

COTTONWOOD CAMPGROUND LANDSCAPE AREA

Cottonwood Campground is a small facility located approximately 7.0 miles below the North Rim along the North Kaibab Trail. Established by the NPS in 1927, the campground marks the halfway point between the Bright Angel Campground near Phantom Ranch and the North Kaibab trailhead. Since its establishment, the campground has served as a layover destination for NPS staff and hikers traveling between Phantom Ranch and the North Rim. In December 1934, the campground also served as a fly camp for CCC enrollees building a spur trail from the North Kaibab Trail to the upper Ribbon Falls. Since this time, the campground has been frequently damaged by flooding due to its proximity to east bank of Bright Angel Creek and has undergone many alterations. According to NPS records, the campground was improved in 1985 in conjunction with a sewer installation project and again in 1993 in response to flash flooding along Bright Angel Creek.

The campground currently encompasses approximately 5.4 acres and contains 14 camp sites, including one emergency camp site, one stock site for mule trains, and one for large groups. The period of significance for the Cottonwood Campground Landscape Area is 1927 to 1942. The Caretaker's Cabin, otherwise known as the Cottonwood Ranger Station, or the Halfway House (#9441), is the only contributing feature of the Cottonwood Campground Landscape Area. The cabin was constructed by the NPS in 1927 for use as a ranger station. The overall physical condition of the Cottonwood Campground is considered to be good.

The Cottonwood Campground Landscape Area has been modified substantially since its establishment in 1927, and therefore, does not retain sufficient integrity for the period of significance as an individually eligible site. Improvements to the campground, most recently completed in 1993, have impeded the site's ability to convey its historical significance. However, the Caretaker's Cabin, a contributing feature of the Cottonwood Campground Landscape Area, was included in the 1980 Cross Canyon Corridor Historic District National Register nomination and should also be included in the updated nomination for the Cross Canyon Corridor Historic District so that it is preserved and protected as part of GRCA's management plans.

Although Cottonwood Campground may not retain sufficient integrity for individual NRHP eligibility, it is still an important landscape within the Cross Canyon Corridor Historic District.

According to NRHP guidelines, the campground draws its significance under Criteria A and C. Under Criterion A, the Cottonwood Campground is significant within the area of Recreation and Tourism for its association with tourist-related activities at GRCA, and for the landscape's association with the CCC. It is also significant under Criterion C for the Caretaker's Cabin, which is a well preserved example of the NPS Rustic architectural style.

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

The Bright Angel Campground is located within the inner Grand Canyon approximately 0.5 mile north of the Colorado River along the west bank of Bright Angel Creek. The campground is adjacent to Phantom Ranch, approximately 0.25 mile to the south of the dining facility, and is approximately 3.5 acres in size. The NPS planned a campground in this general location as one of six along Bright Angel Creek in early 1933. Later that year, the area was developed for Company 818 CCC enrollees as Camp NP-3-A. The CCC occupied the camp seasonally until 1936, after which time the area was used as a recreational campground as originally intended. Today, the campground has 31 campsites that accommodate up to ninety backpackers and continues to serve as a destination point for hikers accessing the area from several backcountry locations.

The period of significance for the Bright Angel Campground is 1933 to 1943. Only one contributing property, the CCC-built Comfort Station, was identified within the Bright Angel Campground Landscape Area. In the 1960s, the inner canyon experienced a devastating flood and many of the early features of the campground, including the Comfort Station, were damaged or destroyed at this time. In the mid-1960s, the NPS remodeled the Comfort Station, built a second structure, known today as the Adirondack Shelter, and replaced numerous retaining walls and footpaths which had been washed away by the floodwaters. The Adirondack Shelter and retaining walls are considered to be non-contributing, compatible structures of the Bright Angel Campground Landscape Area due to their adherence to NPS Rustic architecture principles.

Despite its present condition, which is considered to be good, the Bright Angel Campground Landscape Area no longer retains sufficient integrity to be individually eligible for listing in the NRHP. However, the landscape remains an important part of the historical development of the Cross Canyon Corridor Historic District and therefore, should be preserved and protected as part of the GRCA's management plans. The campground draws its significance from Criterion A for its association with the CCC and recreation and tourism at GRCA.

COLORADO RIVER TRAIL LANDSCAPE AREA

The Colorado River Trail spans 2.0 miles from the Bright Angel Trail at Pipe Creek to the South Kaibab Trail. The trail was built by the CCC between 1933 and 1936 for the sole purpose of connecting the Bright Angel Trail to the South Kaibab Trail. Dubbed by CCC enrollee Louis Purvis as the "most hazardous of any of trail that had been built [by the CCC] at the park," the trail was cut out of the schist and granite cliffs of the Colorado River using air compressors, jackhammers, and 40,000 pounds of blasting powder (Audretsch 2011, 31). Construction of the trail was completed in four phases, with the most difficult section of the trail represented by a 0.5 mile section in the vicinity of Pipe Creek—built between January and June 1935. Completion of the trail in January 1936 effectively marks the completion of all backcountry trail-building at GRCA.

Contributing resources of the Colorado River Trail include the CCC-constructed trail itself, as well as its associated features including stacked stone and mortar retaining walls and drainage gutters.

The period of significance for the Colorado River Trail Landscape Area is 1933 to 1941. According to NRHP criteria, the Colorado River Trail Landscape Area is significant at the national level under Criteria A and C. Under Criterion A, the trail is significant within the areas of Recreation and Tourism and Politics/Government, and for the landscape's association with the

CCC. It is also significant under Criterion C, within the area of Engineering, for its significant engineering accomplishments.

Unlike the other Cross Canyon Corridor trails, which have been realigned or rebuilt post-period of significance due to maintenance and safety concerns, the Colorado River Trail continues to follow its original alignment and has not been altered. This is in part due to the trail's location along the schist and granite cliffs above the Colorado River where alternative routes to the trail are not possible. For this reason, the alignment of the Colorado River Trail remains exactly as it was during the period of significance, and the overall physical condition of the trail is considered to be excellent.

ROARING SPRINGS LANDSCAPE AREA

The Roaring Springs Landscape Area has been the source of water for the North Rim of the Grand Canyon since 1928. In that year, the Union Pacific Railway (UPRR) dammed Bright Angel Creek below the confluence of the creek and Roaring Springs and built a sluice, powerhouse, and pump house that supplied water to NPS developments on the North Rim. Prior to the installation of the Roaring Springs water system, most of the water at the Grand Canyon was supplied by rail and low-water wells located within the park. In the 1930s, the SFRR built a similar water conveyance system at Indian Garden which supplied water from Garden Creek to the South Rim. However, this system was ultimately deemed inadequate due to increased visitation at the park, and in the 1960s, the NPS initiated construction on a new Trans-canyon water system that utilized water from Roaring Springs and the North Rim. Between 1965 and 1966, many of the facilities at Roaring Springs, including the pump house, were razed and rebuilt to accommodate the increasing capacity of the pipeline. The Trans-canyon Water System was completed in 1970. Roaring Springs continues to be the source of water used at the GRCA.

The Roaring Springs Landscape Area includes three discontinuous areas of development, each of which contains facilities associated with the operation and maintenance of Roaring Springs and the Trans-canyon Water System. The first development area is located 3,050 feet below the North Rim and 4.7 miles from the North Kaibab trailhead. The area contains a modern pit toilet facility, emergency telephone, potable water, and a picnic area. The second area, which is located approximately 0.2 miles north of the Pump House Residence, contains the modern pump house facility, a helipad, a shed, and other infrastructure related to the current operation of the Trans-canyon Water System. This area is accessible via a narrow, unmarked spur trail that originates at the North Kaibab Trail and traverses the western ridge of Roaring Springs Canyon. The third area is located immediately west of the North Kaibab Trail, approximately 5.4 miles from the trailhead. This area contains the former residence of pump house operator, Bruce Aiken, and a shed and helipad. The area currently serves as a residence for NPS staff and dignitaries and a rest area and water stop for hikers traveling the North Kaibab Trail.

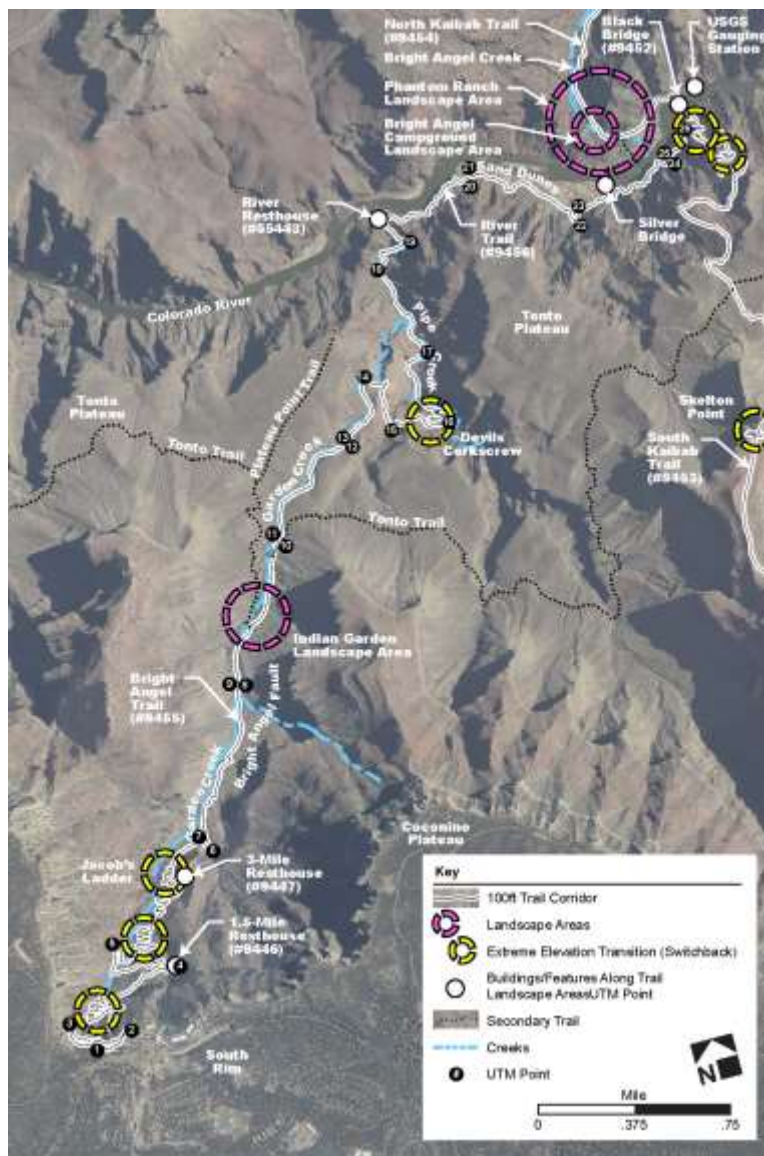
Although numerous buildings and structures are present within the Roaring Springs Landscape Area, only one structure—a remnant section of the original Union Pacific Railroad (UPRR) cable tramway—dates to the period of the significance, which begins in 1928 and extends to 1966. The rest of the buildings are associated with the construction of the 1966 Trans-canyon Water System. Due to its lack of buildings and structures and modern upgrades during the completion of the Trans-canyon Water System, the Roaring Springs Landscape Area lacks sufficient integrity to be individually eligible for listing in the NRHP. However, the area is important to the history of the GRCA and in particular, the development of numerous landscape areas within the Cross Canyon Historic District. The Roaring Springs Landscape Area should therefore be maintained and preserved by the GRCA. According to NRHP criteria, the Roaring Springs Landscape Area is significant under Criterion A for its association with the development of tourist facilities and recreation at GRCA. The physical condition of the landscape area is considered to be fair.

Inventory Unit Size (Acres): Total acreage of the Cross Canyon Corridor Historic District: 484.5
Bright Angel Trail Landscape Area: 85.3
Indian Garden Landscape Area: 22.1
Phantom Ranch Landscape Area: 29.6
South Kaibab Trail Landscape Area: 68.4
Yaki Point (South Kaibab Trailhead) Landscape Area: 6.2
North Kaibab Trail Landscape Area: 221.9
Cottonwood Campground Landscape Area: 5.4
Bright Angel Campground Landscape Area: 3.5
Colorado River Trail Landscape Area: 21.5
Roaring Springs Landscape Area: 20.6

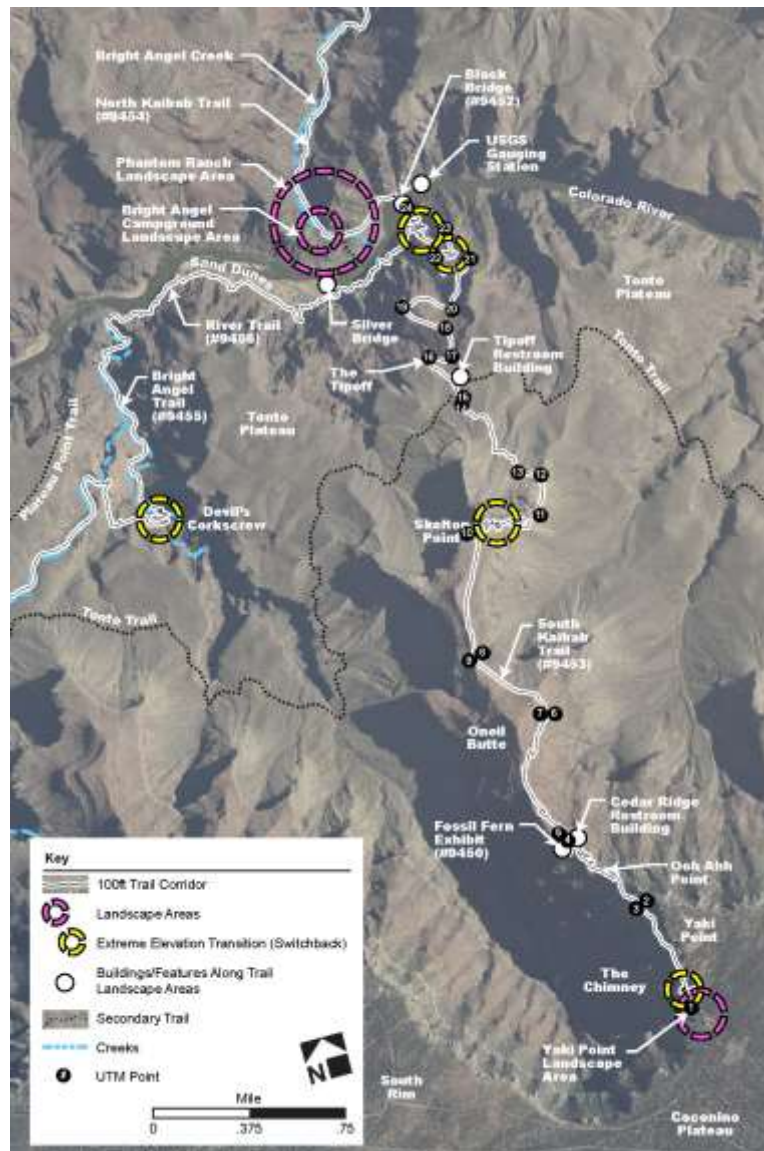
Property Level: Component

CLI Hierarchy Description: The Cross Canyon Corridor Historic District is one of several component landscapes within Grand Canyon National Park.

Site Plan Graphic Information



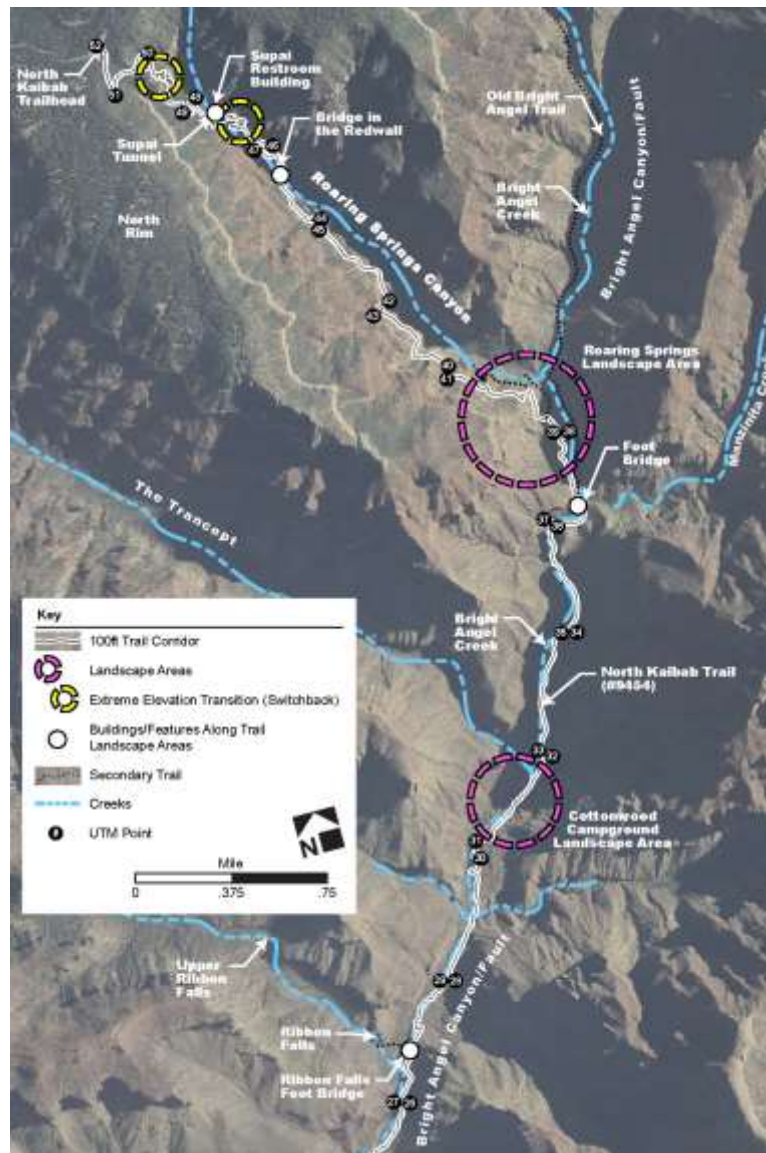
Bright Angel Trail site plan showing major built and natural features, 2011. Source: LSD.



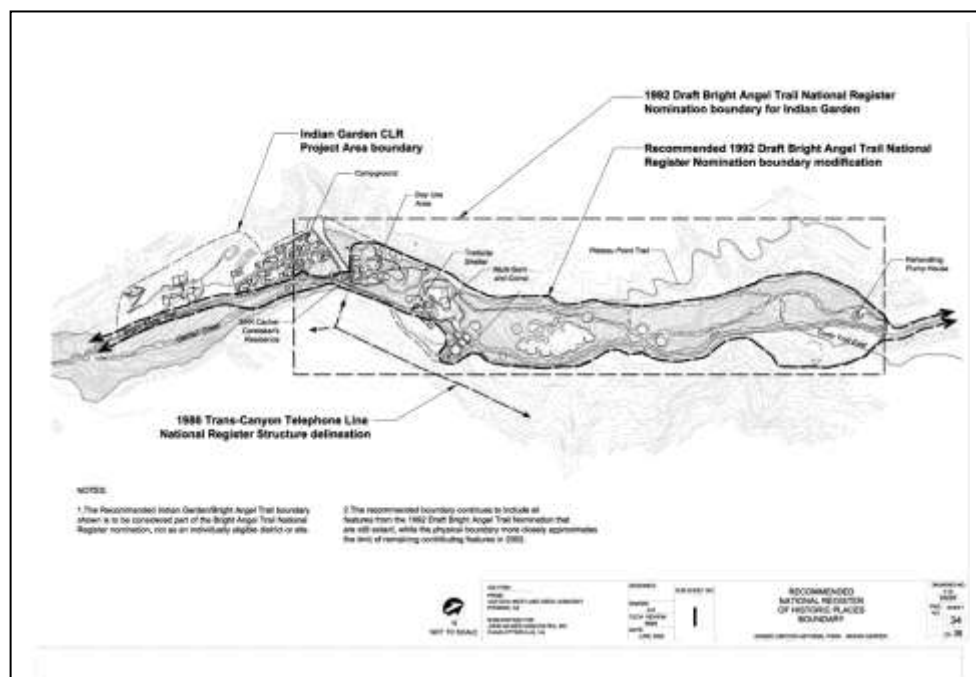
South Kaibab Trail site plan showing major built and natural features, 2011. Source: LSD.



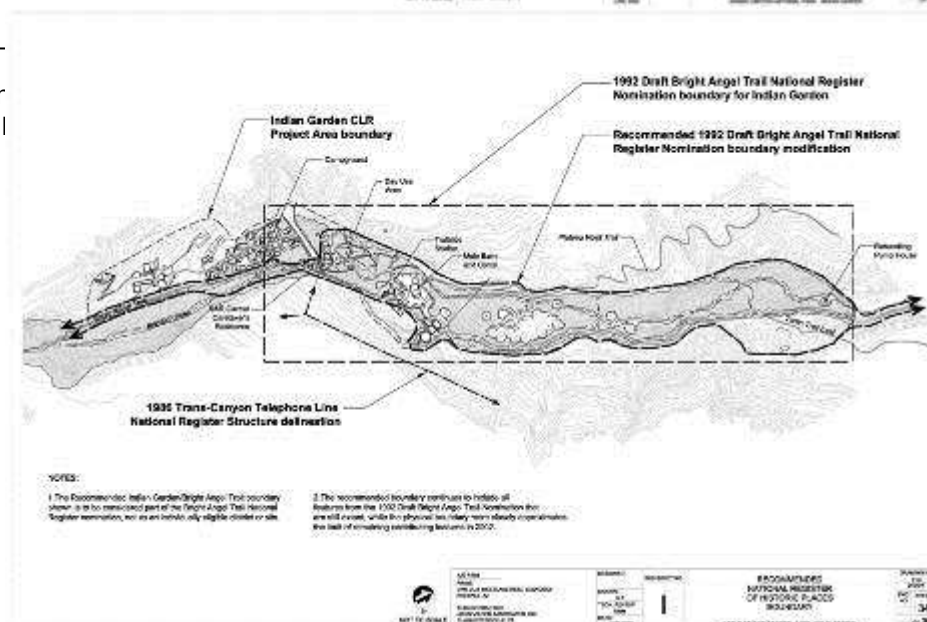
North Kaibab Trail site plan (southern portion) showing major built and natural features, 2011. Source: LSD.

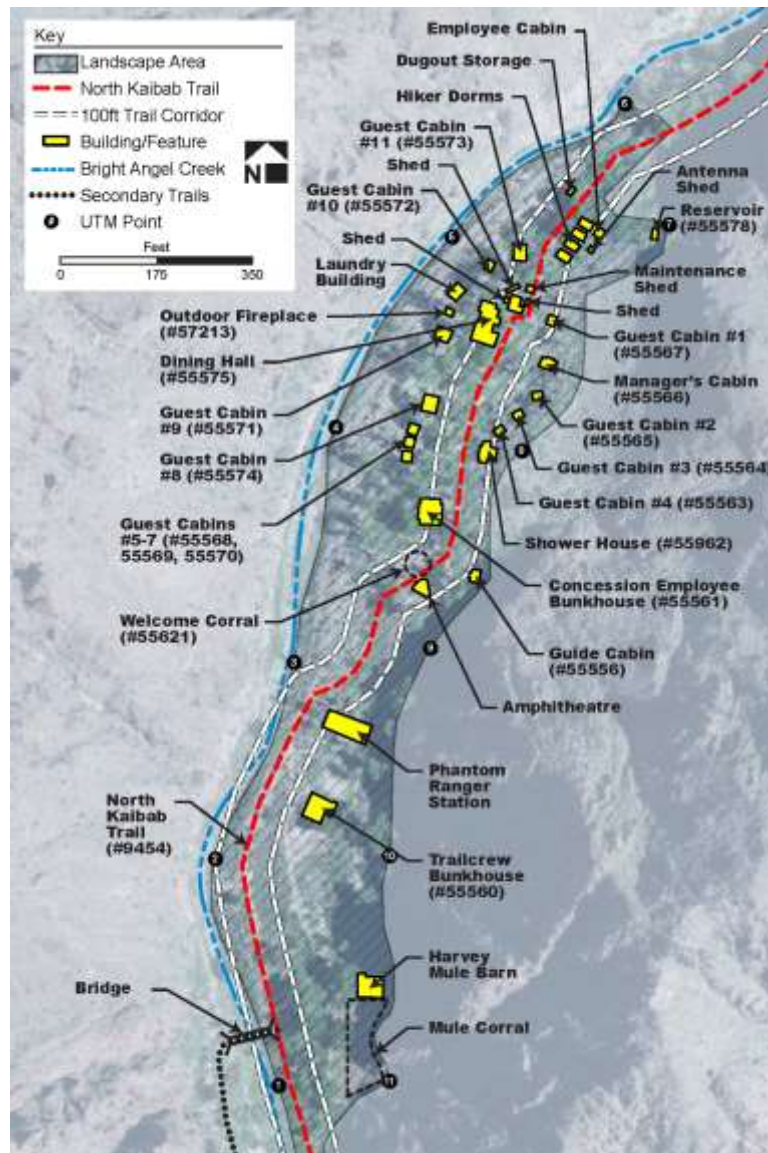


North Kaibab Trail site plan (northern portion) showing major built and natural features, 2011. Source: LSD.

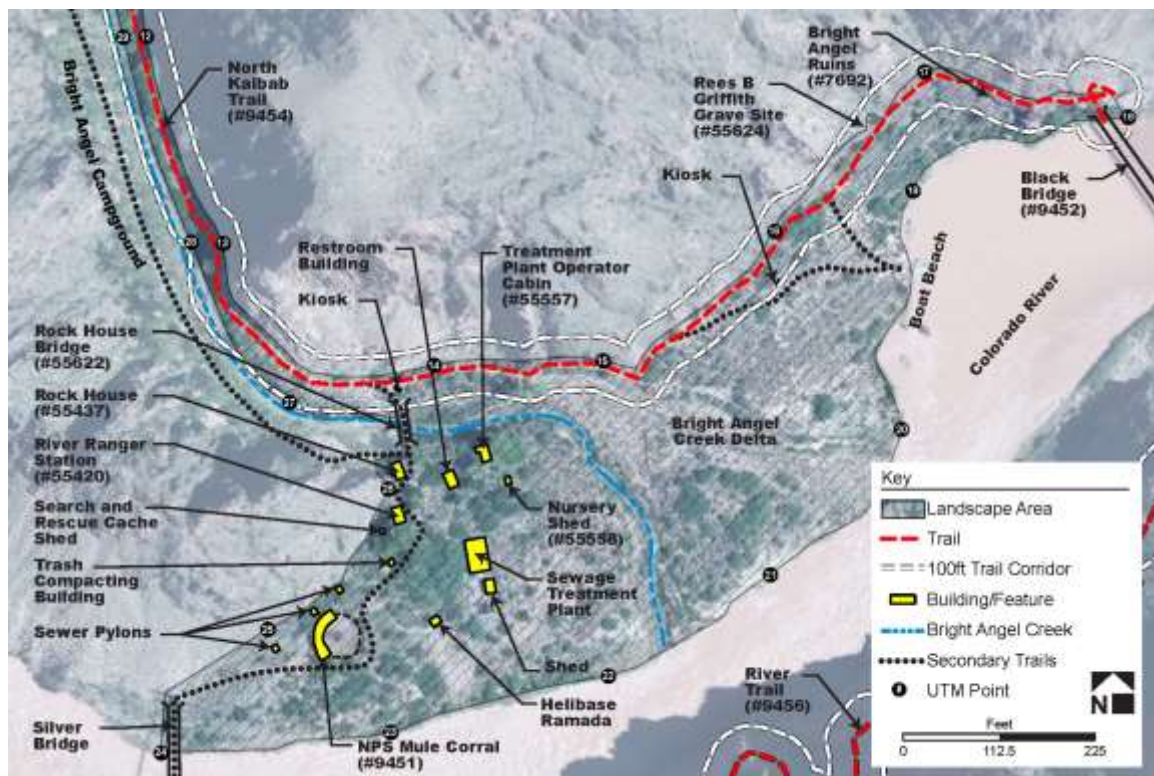
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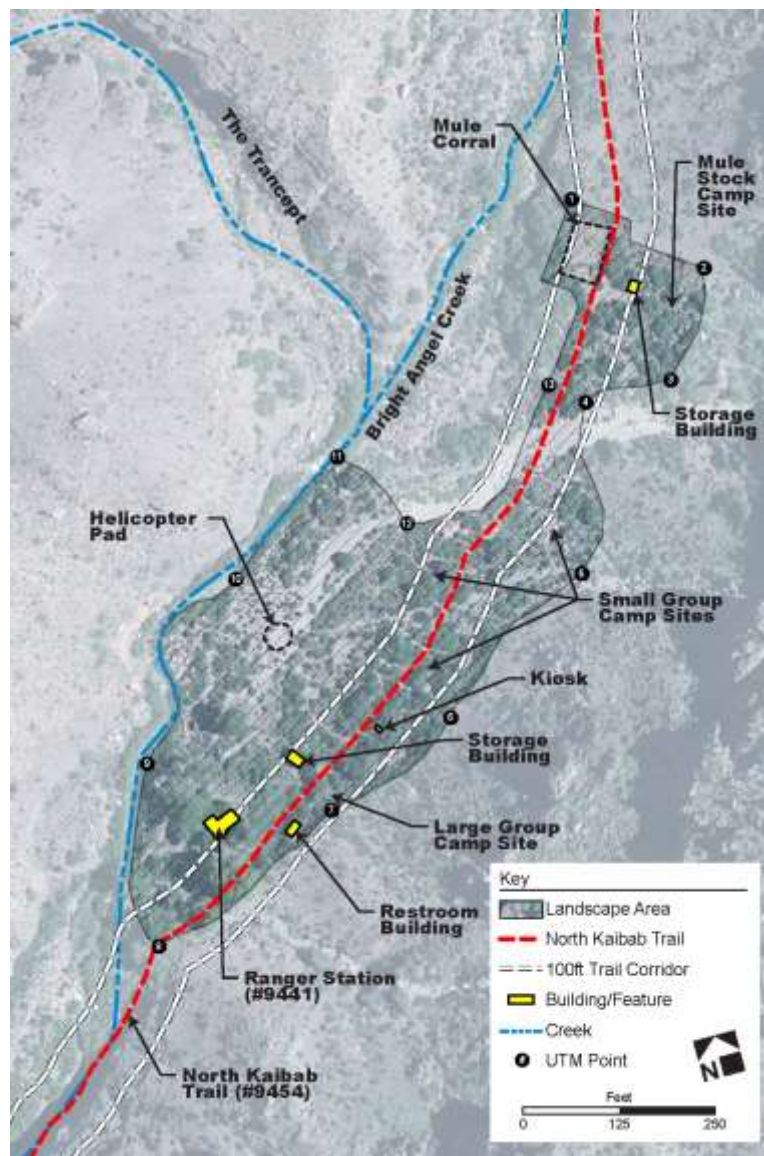




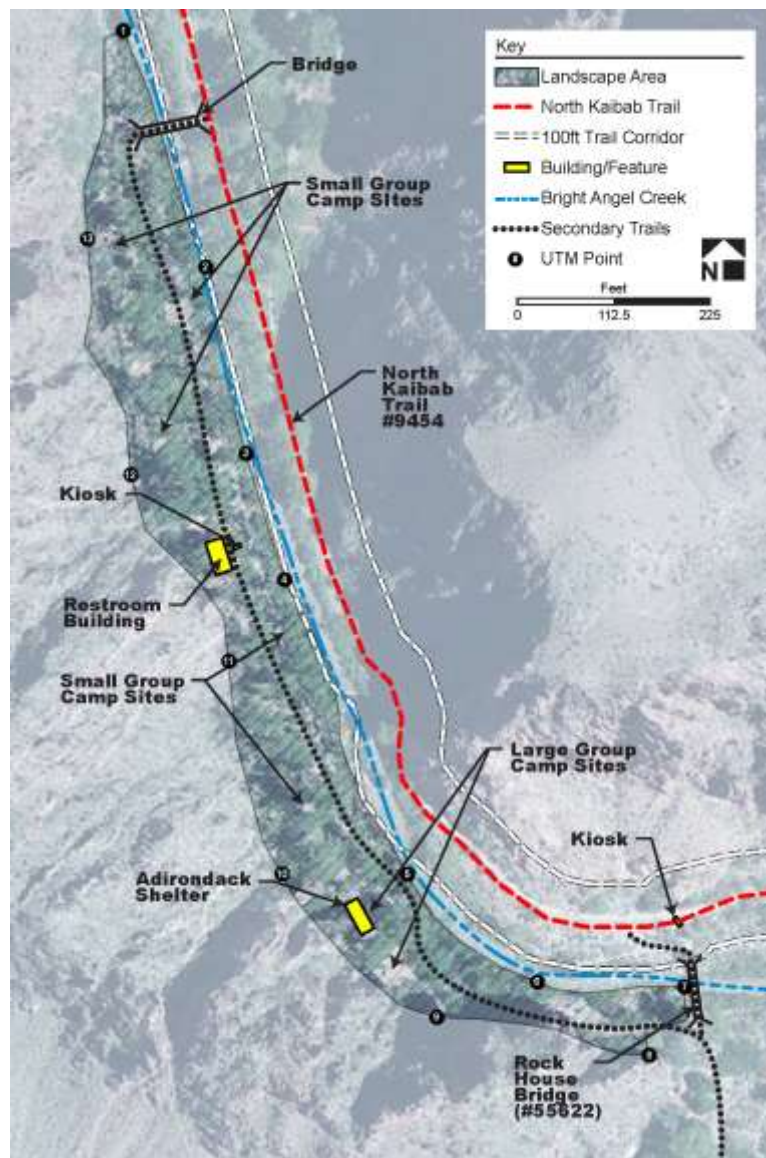
Phantom Ranch site plan (northern portion) showing major built and natural features, 2011. LCS numbers are shown below the resource name in parenthesis. Source: LSD.



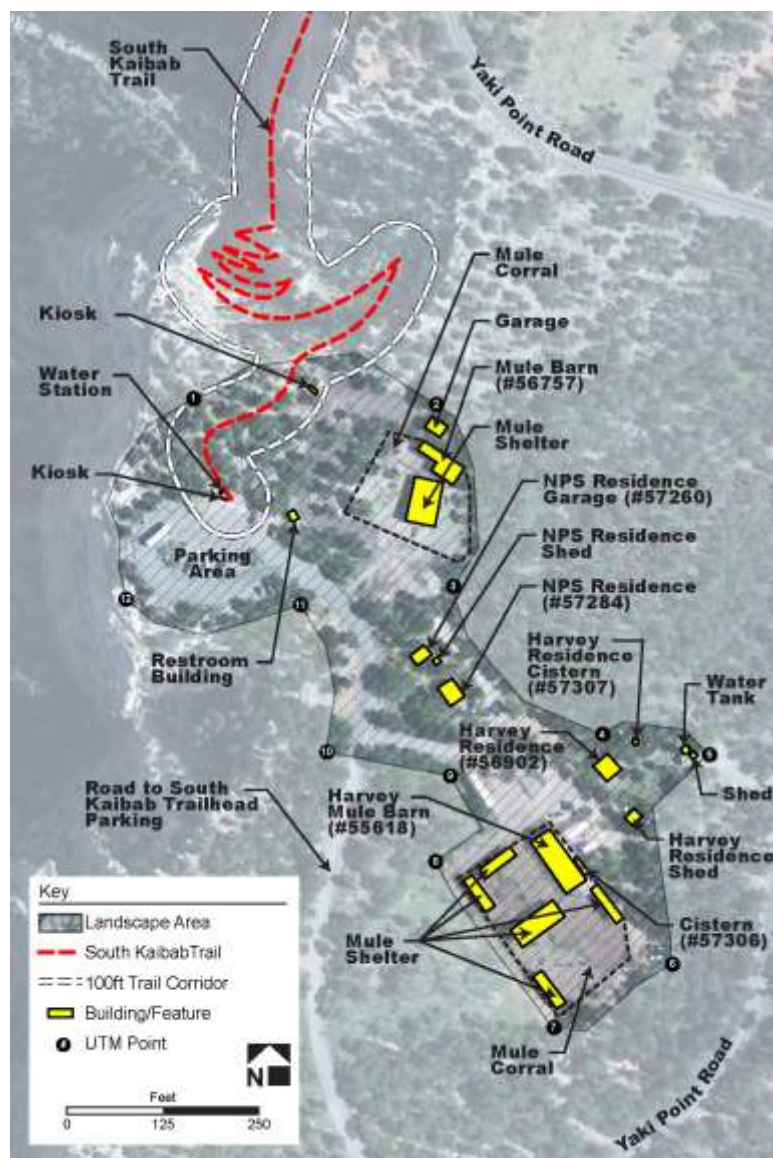
Phantom Ranch site plan (southern portion), also known as the Bright Angel Creek Delta area, showing major built and natural features, 2011. LCS numbers are shown below the resource name in parenthesis. Source: LSD.



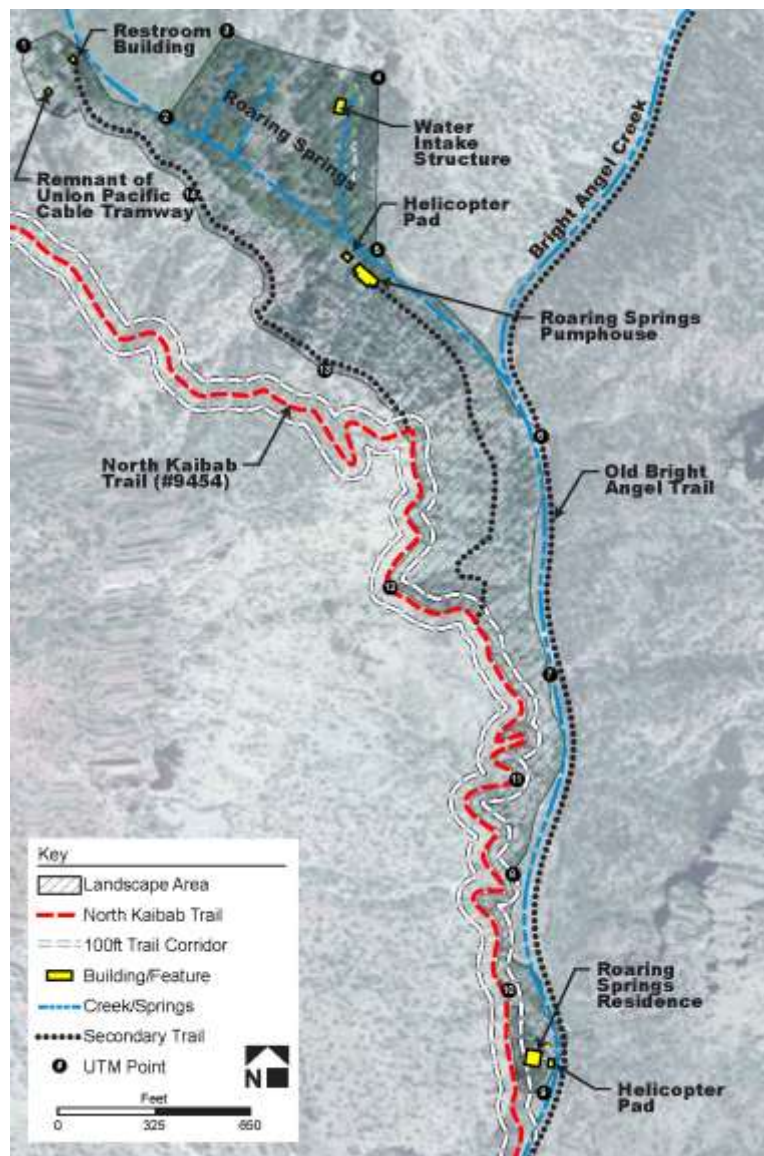
Cottonwood Campground site plan showing major built and natural features, 2011. LCS numbers are shown below the resource name in parenthesis. Source: LSD.



Bright Angel Campground site plan showing major built and natural features, 2011. LCS numbers are shown below the resource name in parenthesis. Source: LSD.



Yaki Point (South Kaibab Trailhead) site plan showing major built and natural features, 2011. LCS numbers are shown below the resource name in parenthesis. Source: LSD.



Roaring Springs site plan showing major built and natural features, 2011. Source: LSD.

Concurrence Status

Cultural Landscape Inventory Name: Cross Canyon Corridor Historic District

Cultural Landscape Inventory Number:

Parent Cultural Landscape Inventory Name: Grand Canyon National Park Landscape

Parent Cultural Landscape Inventory Number: 85011

Park Name: Grand Canyon National Park

Park Alpha Code: GRCA

Park Org Code: 8210

Inventory Status: Use pick list

Completion Status Explanatory Narrative:

Portions of this CLI were adopted from the South Kaibab Trail, North Kaibab Trail, Colorado River Trail, and Cross Canyon Corridor Historic District National Register nominations, as well as the Bright Angel Trail Corridor CLI, which was completed by LSD in 2010. The Bright Angel Trail and the Colorado River Trail were documented by LSD in 2009. Indian Garden was included in the Bright Angel Trail Corridor CLI; however, the information for the Indian Garden Landscape Area contained in this CLI was adapted from the Indian Garden Cultural Landscape Report, prepared in June 2005 by JMA. The Phantom Ranch, South Kaibab Trail, Yaki Point (South Kaibab Trailhead), North Kaibab Trail, Cottonwood Campground, and Bright Angel Campground Landscape Area sections of this CLI were completed in the spring of 2011 by LSD.

Park Superintendent Concurrence: (To be filled in upon Supt. concurrence.)

Date of Superintendent Concurrence (To be filled in upon Supt. concurrence.)

National Register Eligibility: (To be filled in upon SHPO concurrence.)

National Register Eligibility Concurrence Date (SHPO/Keeper): (To be filled in upon SHPO concurrence.)

National Register Concurrence Explanatory Narrative: (To be filled in upon SHPO concurrence.)

Concurrence Graphic Information (To be filled in upon Supt./SHPO concurrence.)

Revisions (Required, if applicable. RC will fill in.)

Geographic Information and Location Map

Cultural Landscape Inventory Name: Cross Canyon Corridor Historic District

Cultural Landscape Inventory Number:

Parent Cultural Landscape Inventory Name: Grand Canyon National Park Landscape

Parent Cultural Landscape Inventory Number: 85011

Park Name: Grand Canyon National Park

Park Alpha Code: GRCA

Park Org Code: 8210

Inventory Unit Boundary Description:

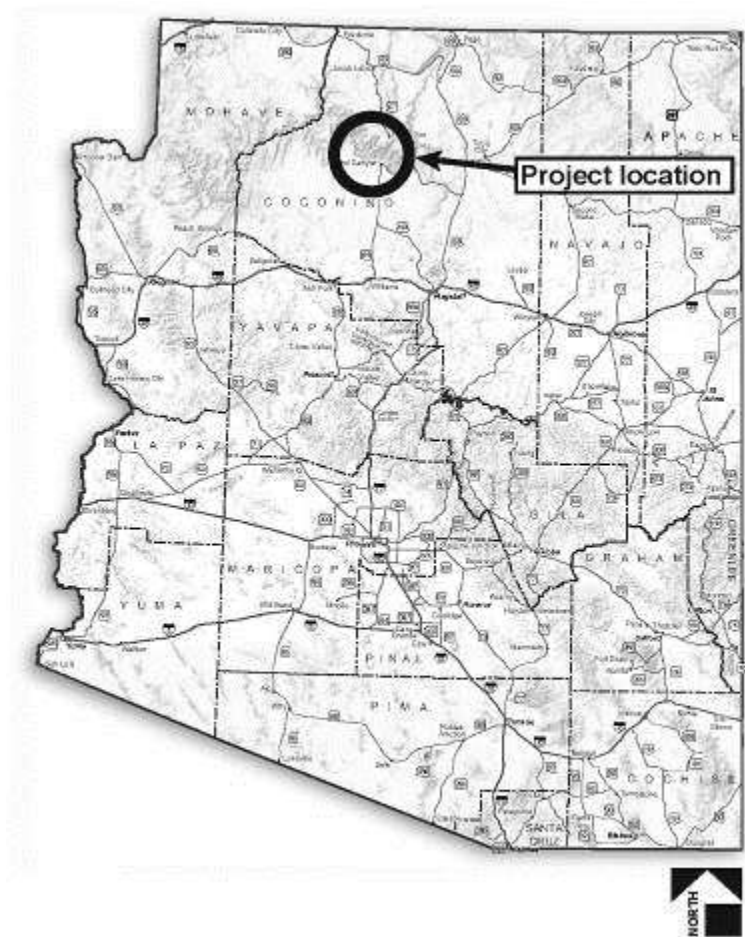
This CLI Inventory Unit boundary is based on the existing boundary of the Cross Canyon Corridor Historic District, as defined in the 1980 National Register nomination, which includes the four Cross Canyon Corridor trails (the Bright Angel Trail, the Colorado River Trail, the North Kaibab Trail, and the South Kaibab Trail) and the development areas of Indian Garden and Phantom Ranch. For the purposes of this CLI, the Cross Canyon Corridor Historic District boundary was modified to include four additional development areas—Yaki Point (South Kaibab Trailhead), Roaring Springs, Bright Angel Campground, and Cottonwood Campground—at the request of the GRCA in 2010. The current Cross Canyon Corridor Historic District boundary includes a 100-foot-wide corridor, or 50 feet on either side of the Bright Angel Trail, Colorado River Trail, South Kaibab Trail, and North Kaibab Trail, except for the Phantom Ranch, Indian Garden, Yaki Point (South Kaibab Trailhead), Roaring Springs, Bright Angel Campground, and Cottonwood Campground Landscape Areas (see site plans for boundaries). Boundaries for the Phantom Ranch Landscape Area follow those defined in Cleeland (1986) as well as the NR nomination for the Cross Canyon Corridor Historic District (Johnson and Crosby 1980), with the exception that it excludes the newly defined Bright Angel Campground Landscape Area. The Bright Angel Campground, Yaki Point (South Kaibab Trailhead), Roaring Springs, and Cottonwood Campground Landscape Areas were each defined by LSD to encompass natural and built features identified during the 2011 field survey. The boundary for the Indian Garden Landscape Area was taken from the Indian Garden CLR prepared by JMA in 2005.

Counties and States

State: Arizona

County: Coconino

Location Map Graphic Information



Project Location map.

Boundary UTM

Boundary UTM Source	Boundary UTM Source Explanatory Narrative	Boundary UTM Type	Boundary UTM Datum	Boundary UTM Zone	Boundary UTM Easting	Boundary UTM Northing	Display Sequence
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	396869	3990898	1; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	397110	3990964	2; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	396742	3991105	3; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	397831	3992032	4; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	397897	3991923	5; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	398309	3992906	6; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	398338	3992896	7; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	398762	3993671	8; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	398788	3993654	9; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	399363	3994201	10; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	399385	3994173	11; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	399585	3994553	12; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	399662	3994188	13; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	400025	3994145	14; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	400007	3994603	15; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	399836	3995180	16; Bright Angel Trail L.A.

ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	400082	3995299	17; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	400567	3995606	18; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	400570	3995573	19; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401162	3995244	20; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401144	3995123	21; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401770	3995407	22; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401792	3995371	23; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401931	3995537	24; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	397133	3991522	25; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	397509	3991278	26; Bright Angel Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402389	3990337	1; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402276	3991058	2; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402249	3991044	3; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401914	3991558	4; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401872	3991615	5; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402010	3992348	6; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401979	3992354	7; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401672	3992820	8; South Kaibab Trail L.A.

ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401643	3992810	9; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401803	3993581	10; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402277	3993575	11; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402347	3993820	12; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402211	3993870	13; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401977	3994375	14; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402001	3994414	15; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401856	3994712	16; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402000	3994682	17; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402008	3994865	18; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401775	3995062	19; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402075	3994967	20; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402268	3995243	21; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402060	3995302	22; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402169	3995466	23; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401966	3995656	24; South Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401924	3995721	1; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401902	3995767	2; North Kaibab Trail L.A.

ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401427	3995607	3; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401431	3995679	4; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401393	3996101	5; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401469	3996165	6; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401970	3996860	7; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402001	3996807	8; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402804	3998155	9; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402829	3998108	10; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402968	3998481	11; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	403210	3998398	12; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	403064	3998660	13; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	403495	3999318	14; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	403526	3999301	15; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	403809	3999847	16; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	403852	3999786	17; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	404471	4000976	18; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	404508	4000966	19; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	404026	4000180	20; North Kaibab Trail L.A.

ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	404060	4000163	21; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	404245	4000434	22; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	404272	4000419	23; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	404889	4001376	24; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	404912	4001356	25; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	405128	4001641	26; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	405158	4001630	27; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	405638	4002295	28; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	405606	4002305	29; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406022	4002990	30; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406018	4003103	31; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406596	4003496	32; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406559	4003544	33; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406928	4004215	34; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406878	4004228	35; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406991	4004926	36; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	407030	4004878	37; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	407220	4005442	38; North Kaibab Trail L.A.

ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	407180	4005450	39; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406626	4006030	40; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406595	4005952	41; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406252	4006454	42; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406372	4006519	43; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406093	4007126	44; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406065	4007064	45; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	405923	4007650	46; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	405800	4007653	47; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	405534	4008068	48; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	405428	4007996	49; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	405312	4008416	50; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	405049	4008211	51; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	405011	4008542	52; North Kaibab Trail L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401354	3995842	1; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401319	3995968	2; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401362	3996077	3; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401385	3996207	4; Phantom Ranch L.A.

ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401450	3996313	5; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401546	3996387	6; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401570	3996320	7; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401489	3996194	8; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401438	3996085	9; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401415	3995969	10; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401416	3995844	11; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401382	3995780	12; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401369	3995780	13; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401407	3995666	14; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401424	3995666	15; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401462	3995577	16; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401542	3995598	17; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401635	3995600	18; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401730	3995672	19; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401814	3995761	20; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401926	3995736	21; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401807	3995695	22; Phantom Ranch L.A.

ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401801	3995562	23; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401728	3995481	24; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401638	3995426	25; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401518	3995394	26; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401390	3995383	27; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401449	3995451	28; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401516	3995529	29; Phantom Ranch L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406549	4003512	1; Cottonwood Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406593	4003472	2; Cottonwood Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406569	4003432	3; Cottonwood Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406534	4003432	4; Cottonwood Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406515	4003367	5; Cottonwood Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406450	4003326	6; Cottonwood Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406395	4003302	7; Cottonwood Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406315	4003268	8; Cottonwood Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406329	4003339	9; Cottonwood Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406382	4003401	10; Cottonwood Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406433	4003437	11; Cottonwood Campground L.A.

ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406453	4003404	12; Cottonwood Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406521	4003443	13; Cottonwood Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401323	3995904	1; Bright Angel Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401352	3995819	2; Bright Angel Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401366	3995753	3; Bright Angel Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401380	3995708	4; Bright Angel Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401424	3995603	5; Bright Angel Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401470	3995564	6; Bright Angel Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401523	3995562	7; Bright Angel Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401510	3995538	8; Bright Angel Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401434	3995552	9; Bright Angel Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401379	3995603	10; Bright Angel Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401360	3995679	11; Bright Angel Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401325	3995745	12; Bright Angel Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	401310	3995829	13; Bright Angel Campground L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402360	3990405	1; Yaki Point L.A.

ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402456	3990403	2; Yaki Point L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402462	3990331	3; Yaki Point L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402521	3990272	4; Yaki Point L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402564	3990264	5; Yaki Point L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402549	3990181	6; Yaki Point L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402502	3990155	7; Yaki Point L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402455	3990221	8; Yaki Point L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402461	3990255	9; Yaki Point L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402412	3990265	10; Yaki Point L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402402	3990323	11; Yaki Point L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	402333	3990326	12; Yaki Point L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406684	4006133	1; Roaring Springs L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406830	4006059	2; Roaring Springs L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406893	4006148	3; Roaring Springs L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	407049	4006100	4; Roaring Springs L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	407048	4005922	5; Roaring Springs L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	407216	4005730	6; Roaring Springs L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	407226	4005485	7; Roaring Springs L.A.

ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	407187	4005278	8; Roaring Springs L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	407220	4005053	9; Roaring Springs L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	407183	4005159	10; Roaring Springs L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	407192	4005376	11; Roaring Springs L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	407061	4005574	12; Roaring Springs L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406994	4005798	13; Roaring Springs L.A.
ArcGIS Explorer; ESRI	NE point; GIS derived	Area	Other	12	406856	4005979	14; Roaring Springs L.A.

Management Information

Cultural Landscape Inventory Name: Cross Canyon Corridor Historic District

Cultural Landscape Inventory Number:

Parent Cultural Landscape Inventory Name: Grand Canyon National Park Landscape

Parent Cultural Landscape Inventory Number: 85011

Park Name: Grand Canyon National Park

Park Alpha Code: GRCA

Park Org Code: 8210

Management Category: Should be preserved and maintained

Management Category Date: 2/7/1980

Management Category Explanatory Narrative:

A Determination of Eligibility (DOE) for the Cross Canyon Corridor Historic District was signed by the Keeper of the NRHP on February 7, 1980. As a result, the Cross Canyon Corridor Historic District should be preserved and maintained.

Do Adjacent Lands Contribute?: No

Adjacent Lands Description: N/A

Management Agreement

Management Agreement: Concession Contract/Permit

Management Agreement Expiration Date: N/A

Management Agreement Explanatory Narrative:

Maintenance of portions of the Yaki Point (South Kaibab Trailhead) and Phantom Ranch developments are managed through a concession contract/permit between the NPS and Xanterra Parks and Resorts. The Bright Angel Trail, Colorado River Trail, South Kaibab Trail, North Kaibab Trail, Indian Garden, Roaring Springs, Bright Angel Campground, and Cottonwood Campground are managed and maintained by NPS.

NPS Legal Interest

Type of Legal Interest: Fee Simple

Fee Simple Reservation for Life: N/A

Fee Simple Reservation Expiration Date: N/A

Other Organization/Agency: N/A

Public Access to Site

Public Access: Unrestricted

National Register Information

Cultural Landscape Inventory Name: Cross Canyon Corridor Historic District

Cultural Landscape Inventory Number:

Parent Cultural Landscape Inventory Name: Grand Canyon National Park Landscape

Parent Cultural Landscape Inventory Number: 85011

Park Name: Grand Canyon National Park

Park Alpha Code: GRCA

Park Org Code: 8210

National Register Landscape Documentation: Keeper – Inadequately Documented

National Register Explanatory Narrative:

The Cross Canyon Corridor Historic District is not currently listed in the NRHP. However, the Trans-canyon Telephone Line, a contributing feature of the Cross Canyon Corridor Historic District cultural landscape, was listed in the NRHP on May 13, 1986. Although there are many cultural resources listed in GRCA on both the North and South Rims, the Trans-canyon Telephone Line represents the only NRHP-listed property within the inner canyon.

There have been multiple efforts on the part of the NPS to list the Cross Canyon Corridor Historic District. In 1980, a National Register nomination was prepared for the Cross Canyon Corridor Historic District, of which the Bright Angel Trail, South Kaibab Trail, North Kaibab Trail, and the Colorado River Trail (referred to as the “connecting river trail”) were identified as significant properties. Additionally, 20 buildings at Phantom Ranch were included in the nomination. The nomination was submitted to the Keeper and the SHPO. Both the Keeper and the SHPO determined that the District was eligible for listing in the NRHP; however, it was not formally listed.

Additionally, individual draft National Register nominations were prepared for the Bright Angel Trail, the South Kaibab Trail, and the North Kaibab Trail by GRCA trails historian Mike Anderson and others in 1991. The following year, a draft Multiple Property Documentation Form for “Historic Roads and Trails of the Grand Canyon” was prepared, as well as an individual National Register nomination for the Colorado River Trail. All of the documents were subsequently revised in 2002 and 2010. The individual draft National Register nominations for the trails and the Multiple Property Documentation Form were submitted to the SHPO on August 28, 1997, who determined that all of the properties were eligible for listing in the NRHP; however, the form and nominations were not submitted to the Keeper.

For the purposes of this CLI, the boundaries of the Cross Canyon Corridor Historic District, as originally defined in the 1980 National Register nomination, were expanded at the request of the GRCA to include Roaring Springs and Yaki Point (South Kaibab Trailhead). Although the pump house at Roaring Springs was noted as an important structure in Section 7 of the 1980 Cross Canyon Corridor Historic District National Register nomination, it was not listed as a property of the District due to its functional relationship with the Grand Canyon Lodge Historic District on the

North Rim. The inclusion of these two areas resulted in the addition of 11 contributing properties, including 10 buildings and structures at Yaki Point (South Kaibab Trailhead) and 1 structure at Roaring Springs. The period of significance for the District was not changed.

National Register Eligibility: (Will be filled in upon SHPO concurrence)

National Register Eligibility Concurrence Date: (Will be filled in upon SHPO concurrence)

National Register Significance Level: National

National Register Significance
Contributing/Individual: Individual

National Register Classification: District

National Historic Landmark Status: No

National Historic Landmark Date: N/A

National Historic Landmark Theme: N/A

World Heritage Site Status: Yes

World Heritage Site Date: 1979

World Heritage Category: Natural

Statement of Significance:

The Cross Canyon Corridor Historic District is eligible for listing in the NRHP under **Criterion A** for its association with early Euro-American exploration and tourist enterprises at the Grand Canyon. The Bright Angel Trail was the first of the trails in the Cross Canyon Corridor Historic District to provide access to the inner canyon and the Colorado River. Similar to other early trails at the Grand Canyon, such as the Grandview and Hance Trails, the Bright Angel Trail was originally built for mining purposes. The Bright Angel Trail was formally constructed by entrepreneurs Niles Cameron, Pete Berry, and others in 1890 for the purpose of conveying burros to transport mining equipment and ore in and out of the inner canyon. However, following the arrival of the Grand Canyon Railway in 1901, mining enterprises waned at the Grand Canyon and the Bright Angel Trail became a popular route for tourists to experience the inner canyon. Until the construction of the South Kaibab Trail in the 1920s, competition with the Bright Angel Trail was non-existent and nearly all traffic within the Grand Canyon's central corridor occurred along the Bright Angel Trail (Anderson 2002, 12; Leonard et al. 2010, 15).

Unlike the South Rim which was a thriving tourism center as early as the 1900s, the Grand Canyon's North Rim was largely unexplored by Euro-Americans until the 20th century due to its isolation from transportation routes and major population centers. In 1902, USGS geologist Francois E. Matthes and his survey crew cleared the region's first route through upper Bright Angel Canyon to facilitate travel during their mapping efforts at the canyon. Matthes' route through Bright Angel Canyon was further developed in 1907 by the North Rim's first concessioner, David Rust, to access his tourist camp in the inner canyon near the present-day location of Phantom Ranch. Development of the early northern trail route opened the region to surveys, explorations, and tourism. Additionally, Rust's tourist enterprises brought increased publicity to the trail which ultimately led to broader developments at and around Bright Angel Point as well as other locations on the North Rim.

Meanwhile, in the early 1900s, the Fred Harvey Company began offering daily mule excursions into the inner Grand Canyon. The popularity of these mule trips and increasing tourism demands

at Grand Canyon eventually led to the development of a tourist hotel, known as Roosevelt's Chalet, in 1922 by the Fred Harvey Company at the present-day site of Phantom Ranch. During its first decade of operation, the development, which later became known as Phantom Ranch, had a reputation as a small exclusive resort for rich and famous celebrities of the "Roaring" 1920s; however, the resort eventually became the domain of middle class tourists following the addition of more facilities in 1928. The establishment of a tourist facility at the bottom of the Grand Canyon, as well as the completion of both a northern and southern access route thereby encouraged the growth of the tourism at the Grand Canyon in the early 20th century.

The Cross Canyon Corridor Historic District is also locally significant under **Criterion A** for its role in achieving the ascendancy of public versus private interests and affirming the vitality of protective resource management at the Grand Canyon. In particular, the South Kaibab Trail represents the final culmination in the political debate regarding public versus private control at the Grand Canyon. When the NPS assumed administrative control of the Grand Canyon in 1919, the most direct access route to the Colorado River was the Bright Angel Trail. After numerous failed attempts to acquire the Bright Angel Trail from Coconino County and entrepreneur Ralph Cameron, the NPS constructed the South Kaibab Trail in 1924 to safeguard their interests in the inner Grand Canyon. Active regulatory and resource protection at the Grand Canyon was further made possible by the completion of the North Kaibab Trail in 1928 which, in conjunction with the South Kaibab Trail, formed the only NPS-constructed Trans-canyon route. Completion of the route was instrumental in ensuring preservation at Grand Canyon as it provided the NPS with access to the inner canyon within a safe and efficient travel corridor. The Trans-canyon route also facilitated the preservation of natural resources by focusing tourist traffic within the central corridor of the canyon. This, in turn, heralded future NPS efforts to protect and preserve resources contained within the Grand Canyon as well as other national parks "in such a manner and by such means" that would leave them "unimpaired for the enjoyment of future generations" (Anderson 2010a, 3; Strong 1978, 2).

The Cross Canyon Corridor Historic District is also locally significant under **Criterion A** for its association with the rigorous efforts of the NPS to accommodate the rapidly expanding tourism industry at the Grand Canyon during the 1920s and 1930s. Both the South and North Kaibab Trails figured prominently in the NPS's plans to develop the Grand Canyon's emerging central trail corridor. With the completion of tourist facilities at Phantom Ranch in the 1930s, the NPS surmised that tourist travel within the inner canyon and along Bright Angel Creek would likely increase. Additionally, Rust's trail leading to the North Rim was in poor condition when the NPS acquired it in 1919 and it could not safely accommodate increased traffic. Construction of the South Kaibab Trail in 1925, and subsequently, the North Kaibab Trail in 1928 marked the completion of a Trans-canyon travel corridor that facilitated safe tourist travel between the rims. The construction of the Kaibab Suspension Bridge in 1928 also changed tourism within the inner canyon by providing safe passage across the Colorado River for both hikers and mules. Completion of the trails and bridge marked a new era of publically managed, convenient and safe travel across Grand Canyon's central corridor, and the trails continue to be used today by recreationists and hikers seeking safe travel into the inner canyon and between the North and South Rims. The trails are also utilized by Xanterra and NPS staff to access Phantom Ranch and other developed areas within the inner canyon.

The Cross Canyon Corridor Historic District is also significant at the national level under **Criterion A** for its association with the CCC and their influence on the built landscape and trails within the District. In the 1930s, CCC workers stationed at Camp NP-3-A in the present-day location of the Bright Angel Campground performed numerous improvement and construction projects within the Grand Canyon's central corridor. Between 1933 and 1941, enrollees from CCC Company 818 built the Colorado River Trail and performed multiple rerouting and gradient adjustments to the Bright Angel Trail, South Kaibab Trail, and North Kaibab Trail. They also built numerous support structures along the trails including trail shelters, bridges, interpretative displays, and retaining walls. The CCC also had a particular influence over the developed areas of the District, including Indian Garden which was in need of intensive clean up and improved rest

houses by the mid-1930s. They also built and rehabilitated numerous buildings at Phantom Ranch and the mouth of Bright Angel Creek. Perhaps the most significant accomplishment of the CCC, however, the 1935 installation of the Trans-canyon Telephone Line which spanned 18 miles from the South Rim to Roaring Springs and facilitated communication between the inner canyon and North and South Rims. The CCC played an important role in the development of the NPS during this period, and their influence is evident in the existing trails and development areas of the Cross Canyon Corridor Historic District today.

Under **Criterion B**, the Cross Canyon Corridor Historic District is significant for its association with Ralph Henry Cameron who, along with others, developed the Bright Angel Trail in the late 19th century. Cameron was born in Southport, Maine in 1863 and moved to the west in 1881. He arrived in Flagstaff, Arizona in 1883 with the Atlantic and Pacific Railroad and worked at a local sawmill, as a railroad clerk, as an agent for the Haywood Cattle Company, and as a manager of a general merchandise store which he later purchased. During his years in Flagstaff, he also ran 6,000 sheep on shares, on which he accumulated the capital to make his Grand Canyon investments. Cameron's reputation increased through the 1890s as he lobbied to create Coconino County in 1891. He was also appointed as the first sheriff of the newly-formed county by the territorial governor (Anderson 2002, 13; Leonard et al. 2010, 15).

Once in the Southwest, Cameron demonstrated a great interest in the Grand Canyon's South Rim, particularly for its potential mining profitability. Pete Berry, Cameron, and Cameron's brother Niles filed a copper claim in 1890 for the Grand Canyon Copper Mine (also known as the Last Chance or Grandview Mines), which became one of the few inner canyon mines that ever produced ore for profit. In order to assist in this endeavor, the men constructed a trail (now known as the Grandview Trail) which stretched from Grandview Point on the South Rim to the site of the mine at Horseshoe Mesa. Cameron and his team also purchased the existing Havasupai Trail that lead into the canyon, which they later renamed the Bright Angel Trail, and worked to convert the trail from a footpath to a road that could support burros carrying mining equipment (Hirst 2006). Cameron's interests did not end with the Bright Angel Trail, however, and by the first few years of the 20th century, he controlled approximately 13,000 acres within the canyon and along the South Rim through mining and water claims. This hold on the South Rim created the most formidable legal obstacle to federal control of the Grand Canyon in the early 20th century (Anderson 2002, 13; Billingsley et al. 1997; Leonard et al. 2010, 16).

Cameron was popular with residents of the newly established Coconino County, and in 1904, he earned a position as Chairman of the County's Board of Supervisors. Cameron often used his political strength to maintain his control over the canyon's South Rim. In 1909, Cameron was elected as a territorial delegate to Congress, and in 1921, he was given a seat in the United States Senate, a position he held until 1927. This political weight enabled Cameron to maintain ownership of the Bright Angel Trail, Indian Garden, and other property at the Grand Canyon, even as governmental agencies and private enterprises such as the U.S. Forest Service, the SFRR, and the Fred Harvey Company, formed alliances to gain control of the South Rim Corridor (Anderson 2002, 13; Leonard et al. 2010, 16).

Cameron's position created a debate regarding private versus public access to land rights and served as a catalyst to similar discussions in other areas of the Grand Canyon and other lands in general. Cameron's claims questioned the power of the NPS and his efforts temporarily eliminated NPS appropriations from the national budget, an action that rallied congressional leaders to the side of the NPS and increased its administrative strength. He was also able to influence voters in Coconino County to defeat a proposal that would sell the Bright Angel Trail to the federal government. This action influenced the construction of the South Kaibab Trail, which gave South Rim visitors a federally managed alternative to the Bright Angel Trail. Cameron maintained strong beliefs that the government should not interfere with individual rights to property, which carried him so far as to file claims on the proposed site of the Hoover Dam within the Black Canyon of the Colorado River (Anderson 2002, 13; Leonard et al. 2010, 16).

Cameron lost his reelection to Congress in 1926, and thus his influence over the Grand Canyon diminished. Cameron and his family subsequently moved east, though he maintained his belief that private developmental rights superseded those of the government. The Bright Angel Trail came under the jurisdiction of the NPS in 1928 (Anderson 2002, 13; Leonard et al. 2010, 16).

Under **Criterion C**, the Cross Canyon Corridor Historic District is significant for the engineering accomplishments of the South Kaibab Trail, the Colorado River Trail, and the Kaibab Suspension Bridge. Described as a trail “down which you could ride a motorcycle,” the South Kaibab Trail embodies distinctive engineering as its construction utilized the most advanced trail building techniques of the time (Anderson 2010a). In particular, the South Kaibab Trail was designed to be the safest, most expedient, and most convenient rim-to-river trail in the canyon. Rather than follow the natural topography of the area, workers blasted much of the trail from the canyon walls using dynamite, jackhammers, and air-compressed tools which had only recently been approved for modern road construction. Use of these tools marked the first time power tools were used at the Grand Canyon for trail construction. The design and attention to user comfort resulted in reduced grades (averaging 18 percent as compared to nearly 38 percent on parts of the Bright Angel Trail), a uniform width of 4 feet, and a smooth, hard-packed surface tread. The trail also had stone retaining walls at specific locations along the length of the trail and numerous turnouts and rest areas for safety. Although the NPS has performed annual maintenance on the trail since its completion in 1925, the trail has changed very little and it continues to be one of the most well-engineered and comfortable routes to the Colorado River today.

The modern construction techniques employed by the NPS during construction of the South Kaibab Trail were later used by the CCC in the 1930s to construct the Colorado River Trail. Described by CCC foreman Louis Purvis as the most hazardous trail ever built at the Grand Canyon, construction of the Colorado River Trail took nearly 13,800 man-days and required the use of air compressors and more than 40,000 pounds of blasting powder to carve the alignment out of the granite and schist cliff above the Colorado River (Audretsch 2011, 37). The trail has not been altered since its completion in 1936, which reflects both its quality of construction and the topographic situation into which it was built. The CCC has been nationally recognized as master builders for their permanent constructions across the United States, and particularly in the American West, and the visual beauty and craftsmanship of the Colorado River Trail embodies their engineering accomplishments (Anderson and Sutphen 1992).

The Kaibab Suspension Bridge also represents a significant engineering accomplishment within the Cross Canyon Corridor Historic District landscape. The bridge was constructed by the NPS in 1928 to connect the South Kaibab Trail with the nearly-completed North Kaibab Trail. The bridge replaced an inadequate wooden suspension bridge that had been previously built by the NPS in 1921. Construction of the bridge was complicated by the remoteness of the inner canyon, and all materials were transported to the construction site using mules and manpower. Construction of the bridge was also dangerous as it required men to hang suspended from slings along the canyon walls and above the swift currents of the Colorado River. Today, the Kaibab Suspension Bridge is one of the few remaining historic bridges that cross the Colorado River. It continues to serve as the connecting point for the South and North Kaibab Trails and has not been altered since its completion in 1928.

The Cross Canyon Corridor Historic District is also eligible for listing in the NRHP under **Criterion C** for its association with master architect, Mary Elizabeth Jane Colter, who designed the original buildings at Phantom Ranch in 1922. Mary E. J. Colter was a distinguished architect in the American Southwest, and was one of the few women to enter that field in the beginning of the 20th century. She was born in Pittsburgh, Pennsylvania on April 4, 1869 and moved to the west in 1886. While attending the California Design School in San Francisco, she apprenticed in an architect’s office and then began a teaching career as an art instructor at the Mechanic Arts High School in St. Paul, Minnesota. Colter began her career with the Fred Harvey Company in 1901 as interior designer of the Indian Building in Albuquerque, New Mexico. The building was

the first of its kind in the state of New Mexico, and by 1910, she was employed as a full-time architect with the company.

During her career with the Fred Harvey Company, which lasted until 1949, Colter designed and/or decorated the interiors of 21 hotels and facilities, including six structures at the South Rim of the Grand Canyon. Four of the Grand Canyon structures—the Hopi House, the Desert Watchtower, Hermit's Rest, and the Lookout—were listed in the NRHP in 1987. These buildings were also collectively designated a National Historic Landmark on May 28, 1987 (National Register Information Center 2011). The remaining buildings, the Bright Angel Lodge, and an associated men's and women's dormitory, are considered contributing buildings to the Grand Canyon Village Historic District, which was listed in the NRHP in 1975 and subsequently amended in 1995, at which time it was designated as a National Historic Landmark. Elsewhere in the United States, examples of her work can be found along the Atchison, Topeka, and SFRR system from Chicago to Los Angeles. Unlike other 20th century architects, who predominantly favored European architectural styles, Colter drew her inspiration from nature and Southwestern cultural traditions, including those of the Spanish and Pueblo, as well as the vernacular constructions of Euro-American miners and cattleman. Colter used these aesthetics to create free-form architectural designs that utilized natural materials and mimicked their natural setting. These design principles served as the basis for the development of the NPS Rustic style, which became the most common architectural form used by the nation's National Parks during the 1920s and 1930s.

The Cross Canyon Corridor Historic District is also recommended eligible for listing under **Criterion C** within the area of *Architecture*, for its collection of buildings designed in the NPS Rustic architectural style. Additionally, Indian Garden may also be significant under Criterion C within the area of *Engineering*, for the design and construction of the SFRR water pumping system. Anderson (2000) provides a thorough description of the pumping system's innovative engineering:

“Completed in August 1932, the new system consisted of a pumping plant with two sets of two turbine pumps, together capable of delivering eighty-five gallons per minute from a 70,000-gallon concrete reservoir through 12,000 feet of six-inch pipe against a static head of 3,300 vertical feet. Some of its more sophisticated features included remote operation from the village power plant, auxiliary pumps at lower springs that fed the upstream reservoir, a photoelectric cell that automatically diverted silty water before reaching the pumps, thermostats that warned plant operators to start idle pumps to keep pipes from freezing, water softeners, and chlorinators” (Anderson 2000, 27).

At present, it is not known how the design and complexity of this historic water system compares to other systems built during the same era. Additional engineering-related research and comparison should be undertaken to determine whether the pipeline embodies the distinctive characteristics of a type, period, or method of construction. Thorough documentation must also be undertaken to assess the integrity of the water system and whether it exists much as it did during the period of significance.

PERIOD OF SIGNIFICANCE

The period of significance of AD 1890 to AD 1942 established for the Cross Canyon Corridor Historic District CLI was selected to convey the most significant developments of the District as both a historic vernacular and designed landscape. The year 1890 marks the date when entrepreneurs Niles Cameron, Pete Berry, and others first began to develop the Bright Angel Trail as a road for both prospectors and tourists to the Grand Canyon. During this period, Ralph Cameron and others, such as the Kolb Brothers, made the Bright Angel Trail the most popular tourist route into the Canyon. In 1902, USGS cartographer Francois E. Matthes began the topographical mapping of the Grand Canyon. At this time, Matthes and his survey crew pioneered a northern trail route through upper Bright Angel Canyon to facilitate their travel between the North and South Rims. In 1907, this northern route was further improved by Grand Canyon Transportation Company proprietors E. D. Woolley and David Rust to access their outpost and

tourist camp, known as Rust's Camp, at the bottom of the canyon. Prior to these years, the portion of the North Rim spanning from House Rock Valley to the east and the Kanab Plateau to the west was familiar only to a small number of cattleman and hunting guides.

In 1919, the Grand Canyon was established as a national park and stewardship was transferred from the U.S. Forest Service to the NPS. In 1922, the NPS recruited the Fred Harvey Company to construct a tourist lodge on a flat expanse adjacent to Bright Angel Creek near the former area of Rust's Camp. To further safeguard their interests and objectives at the Grand Canyon and make the inner canyon more accessible to tourists, the NPS constructed the South Kaibab and North Kaibab Trails between 1924 and 1928. These trails provided a direct, Trans-canyon route to access the Colorado River. Construction of the trails also included the establishment of Yaki Point at the South Kaibab trailhead, which was developed by the NPS and the Fred Harvey Company between 1926 and 1927 as a staging area for pack trains delivering supplies throughout the inner canyon, and the Cottonwood Campground, which was built in 1927 as a resting point for mules and tourists traveling between the North Rim and Phantom Ranch. In 1928, the NPS took control of the Bright Angel Trail, marking the beginning of a new, yet equally important era in the District's history. That year, the NPS constructed the Kaibab Suspension Bridge to link the North and South Kaibab Trails and provide a safer, sturdier means to cross the Colorado River.

In 1933, a CCC camp (NP-3-A) was established in the inner canyon below Phantom Ranch and along Bright Angel Creek in the area now known as the Bright Angel Campground. Throughout the 1930s, enrollees of the camp constructed numerous buildings at Phantom Ranch and the Bright Angel Creek delta, and installed a Trans-canyon telephone line. They also performed maintenance activities along the trails and constructed numerous features including bridges, water bars, walls, and interpretative signage and displays. In 1939, CCC enrollees finished the last segment of the Colorado River Trail, marking the completion of the nominated District. In 1942, the CCC was disbanded and all CCC contributions to the Cross Canyon Corridor Historic District and Grand Canyon National Park ceased. With the exception of on-going maintenance and repairs, the Bright Angel Trail, Colorado River Trail, South Kaibab Trail, and North Kaibab Trail and their associated features, as well as Indian Garden, Yaki Point, and Phantom Ranch, have been altered only minimally since the CCC years. Therefore, 1942 serves as an appropriate endpoint for the period of significance for the proposed District.

NRIS Information

Park Alpha Code/NRIS Name (Number): N/A

Other National Register Name: N/A

Primary Certification Date: N/A

The Cross Canyon Corridor Historic District, including the Bright Angel Trail, the Colorado River Trail, the South Kaibab Trail, the North Kaibab Trail, Indian Garden, and Phantom Ranch was determined eligible for listing in the NRHP by the Keeper on 5/9/1980. Individual consensus determinations of eligibility for the Bright Angel Trail, South Kaibab Trail, North Kaibab Trail, and Colorado River Trail, as well as the Multiple Property Listing for historic trails and roads in the Grand Canyon were signed by the Arizona State Historic Preservation Office on 8/28/97; Individual nominations for the trails prepared by Anderson and Zeman (2010) have not been forwarded to the Keeper because of the concurrent preparation of this nomination. The Trans-canyon telephone line was individually listed in the NRHP on 5/13/86.

Other Certifications

Other Certification: N/A

Other Certification Date: N/A

Park Alpha Code/NRIS Name (Number): N/A

Other National Register Name: N/A

Primary Certification Date: N/A

National Register Significance Criteria

National Register Significance Criteria:

A – Associated with events significant to broad patterns of our history.

B – Associated with lives of figures important in our past (Ralph Cameron).

C - Embodies the distinctive characteristics of a type, period, or method of construction and represents the work of a master (Mary E. J. Colter).

National Register Period of Significance

Start Year: 1890

Start Era AD/BC: AD

End Year: 1942

End Era AD/BC: AD

Historic Context Theme

Historic Context Theme:

Peopling Places

Historic Context Subtheme:

Westward Expansion of the Colonies within the U.S. (1763-1898)

Historic Context Facet:	Explorations of the West
Other Historic Context Facet:	The Mining Frontier
Historic Context Theme:	Creating Social Institutions and Movement
Historic Context Subtheme:	Recreation
Historic Context Facet:	Tourism
Historic Context Theme:	Expressing Cultural Values
Historic Context Subtheme:	Architecture
Historic Context Facet:	Vernacular Architecture
Other Historic Context Facet:	Rustic Architecture
Historic Context Theme:	Expressing Cultural Values
Historic Context Subtheme:	Landscape Architecture
Historic Context Facet:	Impact of Railroads on the American Landscape
Other Historic Context Facet:	The 1930s: Era of Public Works
Historic Context Theme:	Shaping the Political Landscape
Historic Context Subtheme:	Political and Military Affairs: 1865–1939
Historic Context Facet:	The Great Depression and the New Deal, 1929–1941
Historic Context Theme:	Developing the American Economy
Historic Context Subtheme:	Trails and Travelers
Historic Context Facet:	Exploration Trails (Spanish, French, Russian, British, American)
Historic Context Theme:	Developing the American Economy
Historic Context Subtheme:	The Mining Frontier
Historic Context Facet:	Southwest: Arizona and New Mexico
Historic Context Theme:	Developing the American Economy
Historic Context Subtheme:	Extraction or Mining Industries
Historic Context Facet:	Iron and Ferro Alloys
Historic Context Theme:	Developing the American Economy
Historic Context Subtheme:	Service Industry
Historic Context Facet:	Lodging
Other Historic Context Facet:	Tourism
Historic Context Theme:	Expanding Science and Technology
Historic Context Subtheme:	Technology (Engineering and Invention)
Historic Context Facet:	Measurement, Observation, and Control (Surveying, Cartography, etc.)
Other Historic Context Facet:	Construction
Historic Context Theme:	Transforming the Environment
Historic Context Subtheme:	Conservation of Natural Resources
Historic Context Facet:	Origin and Development of the NPS
Other Historic Context Facet:	The Great Depression and Conservation

National Register Areas of Significance

Area of Significance Category:	Architecture
Area of Significance Subcategory:	None
Area of Significance Category:	Conservation
Area of Significance Subcategory:	None
Area of Significance Category:	Engineering
Area of Significance Subcategory:	None
Area of Significance Category:	Entertainment
Area of Significance Subcategory:	None
Area of Significance Category:	Recreation
Area of Significance Subcategory:	None
Area of Significance Category:	Politics/Government
Area of Significance Subcategory:	None
Area of Significance Category:	Transportation
Area of Significance Subcategory:	None

Chronology and Physical History

Cultural Landscape Inventory Name:	Cross Canyon Corridor Historic District
Cultural Landscape Inventory Number:	
Parent Cultural Landscape Inventory Name:	Grand Canyon National Park Landscape
Parent Cultural Landscape Inventory Number:	85011
Park Name:	Grand Canyon National Park
Park Alpha Code:	GRCA
Park Org Code:	8210
Primary Historic Function – Major Category:	Transportation
Primary Historic Function – Category:	Pedestrian Related (16 E)
Primary Historic Function:	Pedestrian-Related – Other (16 EO)
Primary Current Use – Major Category:	Recreation/Culture
Primary Current Use – Category:	Outdoor Recreation (08 FG)
Primary Current Use:	Outdoor Recreation – Other
Ethnographic Study Conducted:	No survey conducted
Ethnographic Significance Description:	N/A

Cultural Landscape Types

Cultural Landscape Type:	Historic Designed Landscape Historic Vernacular Landscape Ethnographic Landscape

Other Current and Historic Uses/Functions

Other Historic Function or Current Use – Major Category:	Domestic (Residential)
Other Historic Function or Current Use – Category:	Hotel (Boarding House) (01 D)
Other Historic Function or Current Use Type:	Both current and historic
Other Historic Function or Current Use – Major Category:	Domestic (Residential)
Other Historic Function or Current Use – Category:	Domestic Residential—Other (01 J)
Other Historic Function or Current Use Type:	Both current and historic
Other Historic Function or Current Use – Major Category:	Government
Other Historic Function or Current Use – Category:	N/A
Other Historic Function or Current Use Type:	Both current and historic

Other Historic Function or Current Use – Major Category:	Landscape
Other Historic Function or Current Use – Category:	Functional Landscape (15 C)
Other Historic Function or Current Use Type:	Both current and historic
Other Historic Function or Current Use – Major Category:	Landscape
Other Historic Function or Current Use – Category:	Scenic Landscape
Other Historic Function or Current Use Type:	Both current and historic
Other Historic Function or Current Use – Major Category:	Transportation
Other Historic Function or Current Use – Category:	Pedestrian Related (16 E)
Other Historic Function or Current Use Type:	Both current and historic

Ethnographic Associated Groups

Ethnographic Associated Group Name:	Havasupai Hualapai Ancestral Puebloan Cohonina Hopi Navajo Zuni Yavapai Apache Paiute
Association Historic, Current or Both:	Historic
Ethnographic Associated Group Name:	Euro-American
Association Historic, Current or Both:	Both

Current and Historic Names

Current and Historic Name	Type of Current and Historic Name	Display Sequence
Bright Angel Trail	Both Current and Historic	1
Havasupai Trail	Historic	2
Bright Angel Toll Road	Historic	3
Cameron's Trail	Historic	4
Indian Garden(s)	Both Current and Historic	5
Phantom Ranch	Both Current and Historic	6
Rust's Camp	Historic	7
Roosevelt's Camp	Historic	8
Roosevelt's Chalet	Historic	9
South Kaibab Trail	Both Current and Historic	10
Yaki/Yaqui Trail	Historic	11
North Kaibab Trail	Both Current and Historic	12
Kaibab Trail	Historic	13
Cable Trail	Historic	14
Rust's Trail	Historic	15
Roaring Springs	Both Current and Historic	16
Colorado River Trail	Both Current and Historic	17
River Trail	Current	18
Cottonwood Campground	Both Current and Historic	19
Bright Angel Campground	Both Current and Historic	20
CCC Camp NP-3-A	Historic	21
Yaki Point	Both Current and Historic	22

Chronology

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
10,000	BC	8000	BC	Inhabited	Toward the end of the Pleistocene Period, Paleo-Indians inhabited portions of the Southwest, relying heavily on megafauna including mammoth, mastodon, long-horned bison, giant sloth, Harrington's mountain goat, camel, and horse. They also exploited wild plants for food, fuel, and tools, although little archeological evidence has been recovered to indicate their use by Paleo-Indian peoples. Within the Grand Canyon environs, Paleo-Indians likely traveled from the canyon rim to the inner canyon, following routes tied to local topography. Evidence for Paleo-Indian occupation within the canyon is limited to a pre-form Folsom Point found in the extreme northeast section of the park in the inner area of Nankoweep Canyon and a base fragment of a Clovis projectile point discovered 30 miles east of the Kaibab Trails in the Desert View area (Collette et al. 2009, 14; Ahlstrom et al. 1992; Babbitt 1978, 175; Cordell 1997, 67-99; Fairley 1989, 88; Fairley 2003, 75; Mabry et al. 1998; Nelson 1990).
8000	BC	1000	BC	Inhabited	During the Archaic Period, humans intensively utilized all areas of the Grand Canyon. The disappearance of megafauna led to the hunting of smaller game as well as the increased exploitation of wild flora for food, medicine, and functional and ceremonial uses. Archeological evidence suggests that Archaic peoples predominantly utilized the South Rim due to its high resource variation. They also used caves and rock shelters for campsites and religious use, as evidenced by the recovery of split willow twig animal figures and the development of petroglyph and pictograph galleries. Additionally, the location of sites adjacent to ecological resources and evidence for their reuse suggests that a semi-sedentary lifestyle

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
					was adopted by the late Archaic period (Collette et al. 2009, 14; Effland, Euler and Jones 1981, 13; Fairley 2003; Schwartz 1989, 20; Sutphen 1992a).
1000	BC	800	AD	Inhabited	The Basketmaker II and Basketmaker III periods are characterized by the initial attempts at agricultural lifeways in the Grand Canyon area. Both periods are poorly known from within the Grand Canyon. The paucity of archeological remains dating to these periods is due in part to a regime of erosion and alluvial down cutting. Non-diagnostic artifacts are known to exist in deposits dating from Basketmaker II and late Basketmaker III times but specific information on how people used the inner canyon and surrounding environs has yet to be documented (Fairley and Hereford 2002; Leonard et al. 2010, 24–25).
800	AD	1300	AD	Inhabited	The Ancestral Puebloan culture was established in the eastern reaches of the Grand Canyon and by AD 1050 had expanded to include both sides of the canyon. Ancestral Puebloan peoples cultivated maize, squash, cotton, and beans. They also engaged in hunting and the gathering of wild plant foods. Pithouses and simple decorated ceramics are common in the Pueblo I period (AD 800 to 950). During the Pueblo II period (AD 950 to 1150), coursed masonry structures and a sophisticated ceramic tradition had developed and occupation was relatively intense. During the mid-1200s, during the Pueblo III period (AD 1150 to 1300), Ancestral Pueblos no longer occupied the Grand Canyon on a full-time basis (Collette 2010; Hughes 1967, 8; Sutphen 1992a).
800	AD	1150	AD	Inhabited	The Cohonina occupied the Grand Canyon region from AD 800 to 1150. The Cohonina lifeway was characterized by seasonal movement among different locales. Archeological evidence indicates that the Cohonina established habitations along the canyon rim and utilized foraging sites

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
					within the inner canyon and Colorado River basin. The Cohonina also practiced agriculture but perhaps to a lesser extent than the Ancestral Pueblo (Ahlstrom 1986; Babbitt 1978, 177-179; Fairley 2003; Sullivan 1986, 324-326; Wilcox 2009; Wright 2009).
800	AD	1250	AD	Built	Ancestral Puebloan and Cohonina peoples both built granary structures from stone, wood, and mortar that were utilized for the storage of surplus grain. Archeological evidence indicates that these granary features were often attached to habitation structures or located on isolated canyon precipices. The structures are typically tucked under ledges of the canyon wall. These peoples also constructed small stone walls that served as check dams to capture alluvial soils and moisture. The walls may have served the dual purpose of providing passive solar devices by storing heat and preventing frost damage to spring seedlings (Babbitt 1978, 178-179; Collette et al. 2010; Coulam n.d., 16; Hughes 1967, 8).
1100	AD	1200	AD	Abandoned	After AD 1150, Cohonina cultural remains are no longer evident in the archeological record. One century later, Ancestral Puebloan people no longer inhabited the area on a full-time basis. Their descendents continued to use the area seasonally to exploit mineral, salt, and plant resources (Fairley et al. 1991, 193-195; Schwartz 1989; Sutphen 1992a).
1300	AD	Present		Inhabited	The Grand Canyon was inhabited by the Cerbat (likely ancestors of the Hualapai and Havasupai Tribes) and Southern Paiute groups during the late prehistoric and historic periods. Unlike the Southern Paiute, who were semi-nomadic and seasonally occupied the canyon's North Rim, the Cerbat primarily inhabited the same areas as the Cohonina and lived in rock shelters and brush wickiups. Their survival was based mostly on hunting and gathering, although they also relied on crops which

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
					they planted near natural springs (Bratz 2003; Effland, Jones, and Euler 1981, 43-44; Euler 1972; Fairley et al. 1991, 110-111; Hughes 1967, 11; Hughes 1978, 14; Hurst 2006; Martin 1985; Schwartz 1983; Schwartz 1989, 43-47; Sutphen 1992a).
1300	AD	Present		Inhabited	The Havasupai lived intermittently at Indian Garden into the 20th century. They established irrigated agricultural fields, collected agave and the seeds of the Blazing Star, and lived in brush wickiups. The Hualapai practiced semi-sedentism, wintering at more permanent sites on or adjacent to the rim and spending planting/harvesting seasons within the tributary canyon bottomlands (Effland, Jones, and Euler 1981, 43-44; Euler 1972; Fairley et al. 1991, 110-111; Hughes 1967, 11; Hughes 1978, 14; Hurst 2006; Martin 1985; Schwartz 1983; Schwartz 1989, 43-47).
1350	AD	1540	AD	Established	Late prehistoric and historic period inhabitants of the Grand Canyon region used previously-established routes and trails that linked the canyon rims with the Colorado River. The trails and routes led to natural resources and to irrigated gardens and fields in minor canyons. The trails also enabled different groups to interact regularly with one another. For example, the Hopi maintained active trade relationships with both the Paiute and Havasupai (Anderson 2002a, 3; Wilson 1999).
1540	AD	1542	AD	Explored/ Abandoned	Under direction from Viceroy of New Spain Antonio de Mendoza, Francisco Vasquez de Coronado and his expedition were charged to "explore the country North of Culiacán in an effort to find seven rich cities of Cibola", otherwise known as the "Seven Cities of Gold." Garcia Lopez de Cardenas and his men represented the north vanguard of Coronado's failed expedition; when Cardenas and his men were unable to penetrate the canyon, they abandoned their mission in disappointment (Verkamp 1940, 1; Whiting 1909, 325; Sutphen 1992a).

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
1700	AD			Cultivated	The Hualapai, Havasupai, and Southern Paiute continued to plant maize, beans, and squash. By the 18th century, peach, apricot, and fig trees, originally introduced by the Spanish and obtained through trade with the Hopi, grew within the inner canyon agricultural fields. They also continued to rely on hunting and gathering. The Southern Paiute were dependent to a greater degree on hunting and gathering (Hughes 1967, 5-13).
1750	AD	1860	AD	Inhabited	Navajo occupation of the Grand Canyon is generally believed to have occurred sometime after AD 1860; however, historical accounts and archeological evidence suggest that Navajos may have inhabited the region by the early to mid 1700s. Ethnohistorical accounts suggest that Navajo families may have roamed over large territories south of the Grand Canyon prior to the incarceration of Navajos at Fort Sumner in the mid 1860s. Following the tumultuous events in the late 1800s and the beginning of the Reservation era, the westernmost Navajo settlements shifted close to the Little Colorado River, within the current boundaries of the Navajo Indian Reservation (Begay and Roberts 1996, 199–200).
1775	AD			Explored	Two Franciscan padres, Silvestre Velez and Francisco Atarcusio Dominguez, explore the Grand Canyon area along with Captain Miera y Pacheco, a Spanish military engineer, in search of an overland route to connect Spanish settlements in Santa Fe, New Mexico with those being developed in California (Sutphen 1992a).
1776	AD			Explored	Franciscan missionary, Father Francisco Tomás Garcés, visits the Havasupai and travels along the South Rim. Garcés referred to the Canyon as "Puerto de Bucareli," or Bucareli Pass, after the viceroy of New Spain. Garcés was also the first explorer to refer to the canyon's river as the "Rio Colorado," or Colorado River. His discovery of the river sustained New Spain's long held

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
					belief that the Grand Canyon region might serve as a viable transportation channel between New Mexico and the Sea of Cortez (Sutphen 1992a; Hughes 1967, 22-25).
1776	AD	1848	AD	Explored/ Inhabited	The Grand Canyon was used intermittently by trappers including Kit Carson, Antoine Leroux, Bill Williams, George Yount, and James Ohio Pattie. Few, if any records, were left by these men, though they are believed to be the first non-Hispanic Euro-Americans to journey to the Grand Canyon. It is believed that these trappers worked the river and its tributaries for beaver until the southwest became United States (U.S.) Territory (Sutphen 1992a; Hughes 1967, 32).
1846	AD	1872	AD	Explored/ Inhabited	Mormon explorers from new settlements near the Great Salt Lake arrived at the Grand Canyon in search of lands to potentially include in their state of Deseret. Mormon explorer Jacob Hamlin had circled the canyon by 1862, and by 1872 the small communities of Cedar City and Kanab were established within a two days ride of the North Rim (Sutphen 1992a).
1848	AD	1880	AD	Inhabited/ Cultivated	Due to its lush riparian environment and numerous springs that supported a wide variety of native flora and fauna, the Havasupai lived seasonally at Indian Garden. Their traditional cultivars included maize, squash, and beans and possibly fruits such as peaches, apricots, figs, and melons. They likely reoccupied early Puebloan Period habitation sites or constructed their own along the prominent ridge slopes (Hirst 2006; Whitney 1982, 41).
1857	AD	1858	AD	Explored	The first official U.S. Government expedition was commissioned to explore the Colorado River under the command of Lieutenant Joseph Ives. Ives' mission was to determine the river's navigability for steamboats. Ives and his men entered the mouth of the Colorado River and traveled 350 miles upriver where the boat struck a rock and sank near the present-day site of the

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
					Hoover Dam. From there, they traveled eastward accompanied by John Strong Newberry, the first geologist to study the rocks of the Grand Canyon. The party passed by the Bright Angel Fault and exited the canyon near the confluence of the Colorado and Little Colorado Rivers. Although Ives was impressed by the canyon, he claimed that the region was "altogether valueless" and a "profitless locality" (Sutphen 1992a).
1869	AD			Explored	Major John Wesley Powell and his team of nine men became the first U.S. expedition crew to systematically explore the Grand Canyon. Because of his expedition, the name "Grand Canyon" became the most common name to refer to the canyon. During his expedition, Powell also stopped at the mouth of a creek along the river, naming it Bright Angel Creek for its clear waters (Tillotson n.d.; Whiting 1909, 324; Whitney 1982, 45).
1869	AD			Explored	The first prehistoric archeological sites including Bright Angel Pueblo, located along the North Kaibab Trail between the Kaibab Suspension Bridge (Black Bridge) and the Silver Bridge, were documented at the Grand Canyon by Major John Wesley Powell (Balsom 2005, 111; Powell 1875).
1880	AD			Mined/ Exploited	Beginning in the late 19th century, prospectors explored the Bright Angel Fault and searched for valuable minerals in the vicinity of Indian Garden. The prospectors capitalized on the growing tourist trade, staking claims in order to control the few trails that had been developed at the canyon, which at the time consisted mainly of prehistoric Native American routes. They also mined claims within Indian Garden and the surrounding Tonto Plateau. As a result of extensive prospecting in the region, numerous adits and tunnels were excavated in an attempt to find valuable minerals and demonstrate that mining claims were being worked (Anderson 2002a, 3; Thybony 2006; Thybony and Berkowitz 2005).

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1880	AD			Ranched/ Grazed	William Ashurst is believed to have herded horses and other livestock down to Indian Garden for pasturage (Anderson 1998, 57).
1880	AD			Built	It is likely that prospectors William Ashurst, John Marshall, and Ralph Cameron built small shelters for themselves or occupied existing buildings within the Indian Garden vicinity during the winter of 1880 (Leonard et al. 2010, 30).
1880	AD	1882	AD	Established	In 1880, President Hayes established the Havasupai Indian Reservation within a 5-mile-wide by 12-mile-long area of the Grand Canyon. In 1882, President Arthur reduced the reservation to 518.6 acres, which included only the village and the agricultural areas. This action was likely motivated by the pressure to free up additional lands for mining prospects (Hughes 1967, 91).
1882	AD	1883	AD	Developed	Senator Benjamin Harrison of Indiana introduced a bill to establish Grand Canyon National Park; a second bill was introduced in 1883 (Beal 1972; Billingsley 1976).
1884	AD			Established	The first "bona fide tourist venture" into the canyon was undertaken by Mrs. Edward Ayer, the wife of a pioneering Flagstaff sawmill owner, and her daughter and a friend along the Hance Trail. The present-day alignment of this trail (known today as the New Hance Trail) is located 16 miles east of the junction of Desert View Drive and the Park entrance road (Sutphen 1991, 57).
1890	AD			Mined/ Exploited	In the spring of 1890, Ralph Cameron and fellow prospector and entrepreneur, Pete Berry filed several ore claims within the canyon, prospecting for mineral wealth (Sutphen 1991).
1890	AD			Built	Prospectors Daniel Hogan, Jeffrey Sykes, and Charles McLane constructed a "stacked stone cabin with canvas roof to serve as a winter home" for themselves near Indian Garden (Anderson 1998, 77).

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
1890	AD	1891	AD	Built/Platted	William Ashurst and John Marshall claimed the old Havasupai trail (later known as the Bright Angel Trail) along Bright Angel Fault leading from the South Rim to Indian Garden for mining purposes. In December, Pete Berry, Niles Cameron, Robert A. Ferguson, Curtis H. McClure, and Millard G. Love established a temporary camp above the fault on the South Rim and made improvements to the old trail alignment to the springs and mining claims below. The following year, the portion of the trail leading down to Indian Garden was documented by Ashurst (Anderson 1998, 57; Leonard et al. 2010, 30; Verkamp 1940, 16).
1890	AD	1891	AD	Purchased/ Built	Pete Berry, Niles Cameron, and others purchased Ashurst's claim for the Bright Angel Trail and began construction of a crude trail extending from Mallery's Grotto to Indian Garden. The primary purpose of the trail was to make an expedient path to mining claims. Construction of the trail, which included clearing, widening, stabilizing, and rerouting the existing trail to safely accommodate pack animals, took several months to complete and cost \$500 (Anderson 1992, 32; Anderson 1998, 86).
1891	AD	1901	AD	Established	In 1891, Pete Berry recorded their newly-constructed trail with Yavapai County as the "Bright Angel Toll Road." Between 1891 and 1901, the men operated the trail as a toll road for tourists and testified that they improved the trail every year. Ralph Cameron eventually purchased the franchise from Berry and shifted his interests to the Grandview Trail and the Last Chance Mine, both of which were located to the east of the Bright Angel Trail (Anderson et al. 2002, 4; Sutphen 1991).
1892	AD	1893	AD	Established	Between 1892 and 1893, Stanford Rowe and John Woods led tourists down the Bright Angel Trail. Woods testified that the trail was continuously maintained and suitable for travel (Anderson 2002a, 4).

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
1893	AD			Established	The Grand Canyon was made a National Forest Reserve, at which time nominal jurisdiction over the region was assigned to the U.S. General Land Office. This designation upset Coconino County officials and residents as the majority of previously-taxable county land was reclassified and became public domain (Sutphen 1991).
1896	AD	1898	AD	Built	J. Wilbur Thurber extended the Flagstaff-Grand Canyon stage line and built a small frame hotel, known as the Bright Angel Hotel, near the Bright Angel Trailhead. That same year, William "Bucky" O'Neil constructed O'Neil's Camp immediately west of Thurber's development. In 1898, Thurber added additional tents to the south of his hotel and renamed his operation the Bright Angel Hotel and Bright Angel Camp. These accommodations at the Bright Angel Trailhead became the nucleus for a new town known as the Grand Canyon Village (Anderson 1998; Anderson 2000; Hughes 1967, 10; Zeman et al. 2006).
1897	AD			Established	The Santa Fe and Grand Canyon Railroad Company was established to build a spur line to the Anita Mines south of the Grand Canyon (Leonard et al. 2010, 31).
1897	AD	1903	AD	Established	As tourism at the canyon began to escalate, Cameron's Bright Angel Trail was recognized as the best and most popular route into the canyon and to the Colorado River. The success of the trail further increased when Cameron erected a small hotel near the trailhead on the South Rim in 1903 (Sutphen 1991).
1898	AD			Developed	Lombard, Goode, and Company began laying tracks for the Grand Canyon Railway from Williams toward the South Rim (Anderson 1992, 33).
1898	AD			Altered	In cooperation with William "Bucky" O'Neil, Lombard, Goode, and Company made improvements to "Cameron's Trail" (later renamed as the Bright Angel Trail). Improvements included

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					modifications to the trailhead and the first several hundred feet of trail, minor reroutes to reduce gradients, and the clearing of rubble (Anderson et al. 1998, 86).
1898	AD	1902	AD	Expanded	In anticipation of increased tourism due to the arrival of the Grand Canyon Railway, Pete Berry and Ralph Cameron hired several laborers including Robert Ferguson, Dan Hogan, Curtis McClure, John R. Holford, D. W. Baxter, and Adam Molenpah to extend the Bright Angel Trail to the mouth of Pipe Creek to access mining claims. They also reconstructed the upper portion of the trail known as the "Zig Zags," located south of Indian Garden (Anderson 1992, 33; Anderson 1998, 73).
1901	AD			Developed	The Anita Mines spur line was completed and purchased by the Santa Fe Railroad (SFRR) (formerly known as the Atchinson, Topeka, and Santa Fe Railroad), which renamed the company the Grand Canyon Railway. The new company made its first trip from Williams to the South Rim of the Grand Canyon on September 17, 1901. Thereafter, the SFRR became the leading promoter and developer of the Grand Canyon. At the same time, Cameron's Bright Angel Trail had become the favored rim to river route at the canyon because of its close proximity to the railroad terminus and adjacent Santa Fe and Fred Harvey developments (Sutphen 1991; Hughes 1967, 90; Leonard et al. 2010, 32).
1901	AD	1903	AD	Inhabited	Martin Buggeln purchased Thurber's Bright Angel Hotel and began to lead tourists down the Bright Angel Trail. Buggeln charged \$3.00/day per horse and \$5.00/day per guide. Trail guides, Thomas Smith and Frank Cornette commented during this time that the trail was in "fine condition" for the "many hundreds" of tourists that traveled the route between 1902 and 1903 (Anderson 1992, 35).

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1901	AD	1928	AD	Mined	Ralph Cameron and others continued to prospect and mine valuable minerals in the Indian Garden vicinity (Hughes 1967, 76).
1902	AD			Built	Brothers and photographers, Ellsworth and Emery Kolb established a studio and shop (#7666) at the Bright Angel Trailhead for processing photographs of tourists travelling along the trail (Hughes 1967, 118–119).
1902	AD			Developed	The United States Geological Survey (USGS) commissioned cartographer and geologist, Francois E. Matthes to map the canyon and plot sections of the North Rim. In 1902, Matthes and his survey crew commenced work on the South Rim, crossing the river on the South Bass and North Bass Trails, located between 16–22 miles northwest of the present-day site of Grand Canyon Village. On their return, the men decided to attempt a descent along Bright Angel Fault to avoid the 25-mile-long trek along the Bass Trails. The party spent several days blazing a crude path along the fault, and by November 7th, they had descended what is presently known as Old Bright Angel Trail. They continued down Bright Angel Creek, crossed the river in a wooden boat belonging to prospector William Bass, and reached the South Rim via the Bright Angel Trail (Berkowitz and Thybony 2005; Anderson et al. 2010, 11).
1903	AD			Established/ Altered	Utah entrepreneurs, E. D. Wooley and J. Emmett organized the Grand Canyon Transportation Company to capitalize on the growing tourism industry at the canyon. The men invested \$5,000 in the company and appointed Wooley's son-in-law, David Rust, to build a "toll road" suitable for stock from the North Rim to the Colorado River. A 1903 map of the toll road depicts the route as a predominantly southern trending road that originated in Harvey Meadow (1.75 miles north of Bright Angel Lodge) and continued past "Hoyt's Point" in Fuller Canyon (presently followed by the road

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
					to Point Imperial/Cape Royal) and along the Bright Angel Creek to "Chamberlain Station." From Chamberlain Station, the road continued as a trail that overlaid an earlier alignment, known as the Red Shale Toll Trail, to the Colorado River. The general alignment of the Red Shale Toll Trail route was later followed by the present Old Bright Angel Trail and North Kaibab Trail (Anderson 2002a, 27; Anderson 2010; Thybony 2001).
1903	AD			Developed	During the summer of 1903, Ralph Cameron established a tourist camp, known as Cameron's Indian Garden Camp, along the Bright Angel Trail at Indian Garden. The camp had a telephone, seven tent cabins, and numerous administrative buildings which were clustered around two small water claims. The administrative buildings and gardens were located in the northern portion of the camp and the tent cabins were located to the south. Cameron also planted an unknown number of cottonwood trees (<i>Populus fremontii</i>) in at least three linear rows near Garden Creek and cultivated an extensive vegetable garden and orchard to provide shade and food for guests. For the first two decades of the 20th century, Cameron's Indian Garden camp was the most popular tourist destination for inner canyon travelers (Anderson 1992, 35; Anderson 1998; Anderson 2002a, 7; Hughes 1978, 68; JMA 2005, 63; Leonard et al. 2010, 32).
1903	AD	1907	AD	Built	Ralph Cameron constructed a hotel and camp, known as Cameron's Hotel and Camp, on the South Rim near the Bright Angel Trailhead to the east of the location of the present-day Bright Angel Lodge. The main building of the hotel had eight guest rooms and a reception area with a large fireplace, rocking chairs, and a piano. Guests could also stay in well-appointed tent cabins or a six-room frame annex. Overnight accommodations cost \$2.00 to \$3.00, and Cameron provided meals, rim rides,

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					riding skirts, and other sundries for a nominal fee to paying guests. Between 1903 and 1907, nearly 2,000 tourists registered annually for accommodations at Cameron's Hotel and Camps (Anderson 1992, 35; Anderson 2006).
1903	AD	1907	AD	Developed	Upon completion of his hotel, Ralph Cameron continued tourist enterprises along the Bright Angel Trail. Cameron charged daily use fees of \$1.00 per horse, \$4.00 per guide, and \$1.00 per rider; pedestrian travel was free of charge until April 1903, when all trail users were charged a \$1.00 toll. Over a six-month period in 1907 alone, Cameron received \$2,996 in trail tolls (Anderson 1992, 35; Anderson 1998; Hughes 1978, 68; JMA 2005, 63; Leonard et al. 2010, 32).
1903	AD	1916	AD	Built	Historic photographs suggest that other canvas and frame buildings and structures, including a kitchen and root cellar, laundry tent, tool shed, man-made pond, pit toilet, two tents for the trail maintenance supervisor and his crew, and a mule barn were added to Cameron's Indian Garden Camp between 1903 and 1916 (Anderson 1992, 35; Anderson 1998; Anderson 2002a, 7; Hughes 1978, 68; JMA 2005, 63; Leonard et al. 2010, 32).
1905	AD			Established	The stewardship of the Grand Canyon was transferred from the General Land Office to the U.S. Forest Service (Forest Service) due to inadequate administration. As administrative control of the canyon shifted, the SFRR and the Fred Harvey Company became firmly established at the canyon. Unlike Ralph Cameron and other local, independent concessioners, the Railway and the Fred Harvey Company were experienced in the fields of transportation and tourism, which allowed them to provide dependable and high quality services at typically lower prices. They were also eager to cooperate with the Federal presence at the canyon, which the local independents were not. Because of this,

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					the canyon tended to unofficially favor Santa Fe and Fred Harvey Company concessioners during the early 1900s (Sutphen 1991).
1906	AD			Established	Wife of inner canyon hunter and prospector, Sidney Ferrell became the first woman to travel between the North and South Rims of the canyon (Thybonny 2001, 20).
1906	AD			Built	Emory Kolb constructed a two-story stone and frame building adjacent to the Garden Creek drainage at Indian Garden for use as a photography studio (Anderson 1998, 90).
1906	AD	1907	AD	Built/Improved	Starting in 1906, David Rust and several laborers working for the Grand Canyon Transportation Company made significant improvements to Matthes' early trail from the Colorado River up Bright Angel Canyon to the North Rim. Although Rust kept a journal of his activities, it does not provide specific information concerning the trail's alignment or its features. Rust's trail improvements were later called the Old Bright Angel Trail, and portions of this trail are presently known as the North Kaibab Trail (Anderson 2010, 3; Cleeland 1986, 39).
1906	AD	1913	AD	Built	Between 1906 and 1913, Ralph Cameron built two tunnels along the upper segment of the Bright Angel Trail through which the current trail alignment passes. Art Metzger, an early canyon resident, recalled that the tunnels were built between 1906 and 1908, and were definitely in place by 1913. Neither tunnel was part of the original trail alignment (Anderson et al. 2002, 5).
1907	AD			Built	Upon completion of his northern trail route, which the North Kaibab Trail would later follow, David Rust established a primitive tourist camp to the east of Bright Angel Creek near the present-day site of Phantom Ranch. The camp consisted of several tents, temporary buildings, and ramadas for overnight guests. Rust also planted cottonwood trees and fruit trees in the area of his camp and built irrigation

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					systems to water them. These accommodations allowed prospectors, hunting parties, and tourists to stay comfortably in the canyon overnight, thus increasing inner canyon visitation. (Anderson et al. 2010, 5; Berkowitz and Thybony, 2005; Cleeland 1986, 39–40; Fleming et al. 1980; Johnson et al. 1980; Thybony 2001; Youngs 2008).
1907	AD			Built	David Rust and E.D. Woolley constructed Wooley's Tramway, a single strand cable car system across the Colorado River near the present-day location of the Kaibab Suspension Bridge (Black Bridge). The system consisted of a large, open-barred metal cage that was strung 60 feet above the river on a cable. When completed, one mule or several people at a time would climb into the cage and move across the river along the swinging cable. (Berkowitz and Thybony 2005; Cleeland 1986, 40; Hughes 1978, 76; Thybony 2001; Youngs 2008).
1907	AD	1908	AD	Built	Following completion of his cable tramway system in September 1907, Rust blazed a trail from the cable crossing on the south side of the river to the land formation known as the Tip-off. The trail, which became known as the Cable Trail, was eventually extended from the Tip-off west along the Tonto Plateau to Indian Garden. The portion of the trail from the cable crossing to the Tip-off is the general alignment that the present-day South Kaibab Trail follows, and the portion of trail from the Tip-off to Indian Garden is the general alignment that the present-day Tonto Trail follows. Archival research suggests that Rust's trail may have been an improvement to an earlier trail claimed by prospector Wash Henry in 1902 (Anderson et al. 2010a, 4; Berkowitz and Thybony 2005; Cleeland 1986, 40; Hughes 1978, 76; Thybony 2001; USDI/NPS NHRP Property Documentation Form, Colorado River Trail, date unknown, GRCA Trail Archives files; Youngs 2008).

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1907	AD	1925	AD	Built	An extensive water catchment system was developed and used adjacent to the present-day alignment of the South Kaibab Trail, atop the rock formation known as the Train Wreck. The remains of the system are still visible from the trail today (Anderson et al. 2010a, 4).
1908	AD			Established	On January 11, 1908, President Roosevelt established the Grand Canyon as a National Monument under management of the U.S. Forest Service. The canyon remained open to private development at this time, but in a controlled manner (Sutphen 1991; Hughes 1967, 102; Warner 1925, 481).
1913	AD			Inhabited	The name of Rust's Camp was changed to Roosevelt's Camp after former U.S. President Theodore Roosevelt stayed at the deserted camp during a hunting trip at the Grand Canyon. Roosevelt also used Rust's cable car system to cross the river. The location of the camp later became known as Phantom Ranch (Fleming et al. 1980, 7; NPS 1975).
1915	AD			Inhabited	The Bright Angel Trail was noted to be in poor condition and Cameron's camp at Indian Garden was considered an "eyesore" (Anderson 1992, 36).
1916	AD			Developed	A Fred Harvey Company map verifies that a number of buildings, structures, and features were present at Indian Garden in 1916. These include eight tents, a stone house, a kitchen, a stable area, a laundry, a fenced vegetable garden and alfalfa field, two tents for "maintainers of the trail," the Kolb "cottage," a corral, and two unidentified structures or tents. The corral, which occupied the area south of the Alder Mill claim, was fenced and also had two unidentified structures which likely represent mule shelters. Additionally, the map suggests that the development was divided into several distinct spaces based on land use (Fred Harvey Company 1916).

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1917	AD			Explored	Early cross-canyon traveler Joseph McAleenan described the treacherous nature of traveling the Bright Angel Trail, but termed it a "boulevard" in comparison to Rust's Trail, later known as the North Kaibab Trail (Anderson et al. 2010, 13).
1919	AD			Established	The Grand Canyon National Park was established by an act of congress and signed into law by President Woodrow Wilson on February 26, 1919. Stewardship of the Grand Canyon was promptly transferred from the U.S. Forest Service to the NPS, initiating strictly enforced protection of the canyon and the termination of private exploitative access to its resources. Designation of the canyon as a national park increased Federal control and presence in Coconino County, which affirmed the fears and resentments of its citizens and set the stage for future conflict in northern Arizona (Hughes 1967, 129–133; Sutphen 1991).
1919	AD			Established	Two weeks after the official designation of the park, the NPS took action to acquire legal ownership of the Bright Angel Trail to eliminate outside influences and enhance their control of inner canyon resources. This proved to be no easy task, however, as the trail generated approximately \$5,000 annually in tolls for Coconino County. Simultaneously, the Fred Harvey Company began lobbying the NPS to build their own trail to the Colorado River in hopes of blocking what they foresaw as lengthy negotiations with Coconino County (Sutphen 1991).
1919	AD			Land transfer	Ownership of the Bright Angel Trail was transferred from Ralph Cameron to Coconino County following the United States Supreme Court ruling, which found most of his mining claims at Grand Canyon invalid (Anderson 2010a).
1919	AD			Established	During negotiations between Coconino County and NPS, the County communicated that the cost of acquiring the Bright Angel Trail would be

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					\$150,000. Acting Superintendent of Grand Canyon National Park, B.W. H. Peters found this price exorbitant and commissioned a new trail route to the river to be surveyed. The new trail (later known as the South Kaibab Trail) was estimated to cost \$30,000 to construct, which provided the NPS with a viable and less expensive alternative to purchasing the Bright Angel Trail. Below the Tip-off, the new trail was proposed to follow portions of Rust's existing Cable Trail. Peters presented the alternative in subsequent negotiations and Coconino County officials refused to negotiate with him (Sutphen 1991; Anderson et al. 2010a, 2).
1919	AD			Established	General engineer for the NPS George E. Goodwin was sent in late December 1919 to resume negotiations with Coconino County over the sale of Bright Angel Trail. The NPS offered to buy the trail outright for \$77,118 or for a \$100,000 promissory with payment dependent on the establishment of a central access road to the canyon (Sutphen 1991).
1920	AD	1921	AD	Built/Altered	The NPS initiated a reconstruction and improvement project along Rust's Trail, then known as a northern extension of the Bright Angel Trail (later referred to as the Old Bright Angel Trail and presently as portions of the North Kaibab Trail). Between 1920 and 1921, trail crews improved the lower 2 miles of the trail known as "The Box" in a narrow portion of Bright Angel Canyon above the present-day site of Phantom Ranch. This work involved blasting through approximately 5,955 linear feet of granite. Additionally, a total of six creek crossings, spanning between 16–25 feet, were constructed. All of the crossings consisted of steel beam bridges with concrete floors, bituminous wearing surfaces, and woven wire guard rails. All of the materials had to be packed into the canyon via mule. The improvements to the trail eliminated more than 40 of the 94 crossings of

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					Bright Angel Creek originally built by Rust and Matthes (Berkowitz and Thybony 2005; Tillotson n.d.; Anderson et al. 2010, 3).
1920s	AD	1930s	AD	Developed	Architects from the NPS Branch of Plans and Design developed a distinct architectural style known as "NPS Rustic," which rejected popular European styles and designed structures which related well to their environment. A 1935 NPS publication written to train new designers and architects in the style defined it as "a style which, through the use of native materials in proper scale, and through avoidance of rigid, straight lines, and over-sophistication, gives the feeling of having been executed by pioneer craftsmen with limited hand tools" (Cleeland 1986, 63).
1921	AD			Built	The NPS built a suspension bridge at the site of Rust's tramway to address safety concerns for those using the Cable Trail (later known as the South Kaibab Trail). The unnamed bridge, later known as the "Swinging Bridge" for its tendency to swing uncomfortably in winds, was finished in the summer of 1921. It was the first bridge within the park to be constructed over the Colorado River, thereby allowing for more efficient rim-to-rim travel. Prior to the completion of the bridge, the nearest bridge crossing was 370 miles upstream in Moab, Utah; downstream, the closest bridge was 38 miles away between Needles, California and Topock, Arizona. The bridge accommodated only one mule and rider and cost the NPS nearly \$17,000 to construct. It was later replaced by the Kaibab Suspension Bridge (also known as the Black Bridge) (#9452) in 1928 (Webber 1929; Karpinski 1986; Adams 1921; Skerrett and Tillotson 1926).
1921	AD			Inhabited	The NPS established a small tent camp, consisting of three camping tents, a dining room, and a kitchen, at the Colorado River for workers building the suspension bridge (Adams 1921).

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1921	AD			Established	The bridge had an unofficial mascot during construction—a burro by the name of Little Bright Angel, or "Brighty." The bridge foreman observed that the burro had "stood so long on the north shore of the river hoping to get across." The burro would not swim across the river, and was fearful of the leaky canvas boat that the bridge crew used. The foreman claimed that when the bridge was done, the burro, rather than the proposed "distinguished American from Philadelphia," would have the honor of the first crossing, which he did. Brighty was also the subject of Marguerite Henry's 1953 children's book, <i>Brighty of the Canyon</i> . A statue of Brighty sits in Grand Canyon Lodge at the North Rim (Adams 1921).
1921	AD			Preserved/ Exploited	Journalist Harriet Chalmers Adams observed the ruins of a small "ancient Indian village" near the confluence of Bright Angel Creek and the Colorado River during a mule trip to the Colorado River. Adams later described the village in a <i>National Geographic</i> article as "broken walls strewn with prehistoric pottery—coils and Greek key patterns—such as are found among the Mesa Verde cliff dwellings." These ruins, known today as the Bright Angel Ruins, were later stabilized by the NPS (Adams 1921).
1921	AD	1926	AD	Built/Altered	Between 1921 and 1926, NPS trail crews completed reconstruction efforts along a 1.25-mile-long segment of Rust's Trail (later known as the North Kaibab Trail) from the bottom of the canyon to Ribbon Falls, or the halfway point of the trail (Anderson et al. 2010, 3).
1922	AD			Designed/ Built	In early 1922, the Fred Harvey Company and the SFRR announced plans for the construction of a new hotel in the former location of Rust's tourist camp. Architect Mary Colter designed the hotel, which was tentatively called Roosevelt Chalet. Modeled after other western ranches of the day, her design consisted of a "large combined dining

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					room and restroom" with "three large cabins with wide sleeping porches" and a "caretaker's cabin" clustered around it. The buildings were constructed in the Craftsman Bungalow architectural style, and had angular, native stone walls so that they blended with the surrounding landscape. Construction of the ranch cost \$20,000 and was paid for by the SFRR. Other structures in the area, not designed by Colter, included a water reservoir (#55578) and a mule barn. Colter eventually renamed the area Phantom Ranch after nearby Phantom Canyon (Thyborny 2001; Cleeland 1986, 42, 43; Fleming et al. 1980, 7).
1922	AD			Built	A chicken shed and yard, rabbit runs, a blacksmith shop, and numerous rock walls and fences were constructed at Phantom Ranch. The blacksmith shop, rabbit runs, and chicken shed were eventually destroyed by a landslide and are no longer present (Cleeland 1986, 43).
1922	AD			Planted/ Cultivated	Numerous sycamore and cottonwood trees were planted in the vicinity of Colter's buildings at Phantom Ranch to provide visitors with shade. Additionally, as the ranch was designed to provide many of its own needs, an orchard of peach, plum, and apricot trees was cultivated to the south of the original Guide's Cottage, and an alfalfa field for use as livestock feed was developed south of the orchard. The trees and orchard were planted by 'Shorty' Yarberry; he also planted most of the original landscaping at the ranch and was known to some as an 'aging packer-turned-landscape-architect' (Unknown 1979; Cleeland 1986, 43).
1922	AD			Developed	Through an agreement with Coconino County, the Fred Harvey Company offered two-day mule trips along the Bright Angel Trail from the South Rim to Phantom Ranch for \$19.00 (Cleeland 1986, 43).

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1922	AD			Established	Arizona Congressman Carl Hayden lobbied in favor of the NPS's \$100,000 promissory terms for the sale of the Bright Angel Trail. In regards to on-going negotiations between Coconino County and the NPS, Hayden stated in 1922: "The idea occurs to me that Coconino County might make a profitable trade in selling the [Bright Angel] Trail. Tourist traffic is doubling almost every year and the greater the attraction the Grand Canyon can be made as one of the seven wonders of the world, the greater an asset it would be to Coconino County, as well as all of Arizona" (Karpinski 2003a; Sutphen 1991).
1922	AD			Planned	Because of their recent cooperation with the NPS on the development of Phantom Ranch, the Fred Harvey Company and SFRR increase their efforts to persuade the NPS to construct a new trail (later designated the South Kaibab Trail) from the South Rim to the Colorado River (Sutphen 1991).
1922	AD			Altered	The NPS widened and improved Rust's Cable Trail (later known as the South Kaibab Trail) from the Tip-off to the Colorado River to facilitate access to their newly-constructed suspension bridge (Swinging Bridge). Trail Foreman Rees B. Griffiths died on February 6th at the age of 49, as a result of injuries received while widening the Cable Trail. Griffith was buried in the canyon, and his grave and a bronze plaque commemorating his death are visible on the north side of the North Kaibab Trail between the present-day Kaibab Suspension Bridge (Black Bridge) (#9452) and Phantom Ranch (Sutphen 1991; NPS n.d., 2).
1922	AD			Built	During the fall of 1922, the USGS installed a gauging station at the Bright Angel Creek delta near the unnamed NPS suspension bridge. The station included a 50-foot-high recorder tower; a 410-foot-long span cable positioned 60 feet above the Colorado River; and a 12-foot-long by 14-foot-wide Operator's

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					Cabin (#55557). The NPS supervised all aspects of the station's construction to ensure that the built environment would be subordinate to the building's natural surroundings. They required that the exposed reinforced concrete walls of the recorder tower be faced with granite spalls and suggested that the Operator's Cabin be modeled after Colter's buildings at Phantom Ranch. During construction of the gauging station, more than 2 miles of the (North) Kaibab Trail were reconditioned to facilitate the expedient transport of building materials (USGS Gauging Station Report n.d.).
1923	AD			Established	The NPS's \$100,000 promissory agreement, which included the construction of a new South Rim approach road that connected with United States Route 66 (later called the Maine-Grand Canyon Road) for the purchase of the Bright Angel Trail, was finally approved by Coconino County in the spring of 1923. However, an appropriation was added to the agreement which stated that if problems occurred with the sale of the trail, the funds would be re-appropriated to the NPS for the construction of a new trail (the South Kaibab Trail) into the canyon. Following approval of the deal, a "newspaper war" commenced between the <i>Coconino Sun</i> and the <i>Williams News</i> . The <i>Coconino Sun</i> was a strong proponent of the sale and the <i>William News</i> was strongly opposed to it. Ralph Cameron also rallied supporters against the deal (Karpinski 2003a; Sutphen 1991).
1924	AD			Planned	Due to the negative publicity and Cameron's protests, voters rejected Coconino County's proposition to sell the Bright Angel Trail in November 1924. Two days later, Park Superintendent J. R. Eakin sent a letter to NPS Assistant Director Arno Camerer affirming his belief that the SFRR and Fred Harvey Company voted against the sale of the trail. Almost immediately,

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					the NPS announced plans to construct a new trail (the South Kaibab Trail) from Yaki Point on the South Rim to the Colorado River. On November 12th, a memorandum was sent to Eakin from Camerer advising that the Department of the Interior would likely approve construction of the trail (Sutphen 1991).
1924	AD			Altered	The NPS initiated a program of removal of Havasupai cultural remains from Indian Garden. During their removal efforts, the NPS posted signs calling attention to contaminated water at Indian Garden (Anderson 2002a, 7).
1924	AD			Built	Engineers from the SFRR constructed a stone weir and gauge in Garden Creek below the Kolb brothers' photography studio at Indian Garden (Anderson 2002a, 7).
1924	AD			Altered/ Cultivated	Fred Harvey Company employee, R. Hunter Clarkson sent a letter to Park Superintendent J. D. Eakin informing him that a small tract of land on the "other side of Bright Angel Creek near Phantom Ranch" had been cleared and sown with alfalfa. Apparently, this location was not formally deeded for use as Clarkson asked to add the area to Fred Harvey Company's "permitted vicinity" (Clarkson 1924).
1924	AD			Built	Immediately following the November election when the sale of the Bright Angel Trail was defeated, Park Superintendent J. D. Eakin began establishing camps, building necessary construction roads, organizing crews, and purchasing supplies and equipment for the construction of a new trail (the South Kaibab Trail) from the South Rim to the Colorado River. The purpose of the trail was to consolidate tourist access to the central reaches of the canyon and to discourage private involvement within the boundaries of the Park (Sutphen 1991; Anderson et al. 2010a, 4; Karpinski 2003a).
1924	AD	1925	AD		Construction of the trail (later designated the South Kaibab Trail) began on December 3, 1924. Two construction camps were established:

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					"one at the South Rim to work toward the river and one in the bottom of the canyon working up toward the top." The lower camp was lead by John F. Brown and included a crew of 15 Mormons. The 20 workers at the South Rim were lead by Chuck Seavey. Progress on the trail was slow and costly due to difficulties drilling and blasting rock and weather-related delays. The trail was finished on June 15, 1925 for a cost of approximately \$73,000, although finishing touches continued into September. On June 26, 1925, the first mule caravan ascended the trail from Phantom Ranch. At this time, the trail was dedicated the "Kaibab Trail" after the Kaibab National Forest on the North Rim, although it was also called the Yaki Trail due to the location of its trailhead at Yaki Point on the South Rim (Sutphen 1991; Anderson et al. 2010a, 4; Karpinski 2003a).
1925	AD			Rebuilt	The NPS rebuilt the last 2 miles of the Rust's Cable Trail south of the Colorado River to transport building materials and equipment and incorporated it into the newly-constructed Kaibab Trail (later designated the South Kaibab Trail) (Cleeland 1986, 52).
1925	AD			Built	As a result of increasing tourism in the canyon due to the rising popularity of the mule trips, the Fred Harvey Company and SFRR expanded its facilities at Phantom Ranch to accommodate more guests. Additions in 1925 included four tent cabins, each of which accommodated four people (now gone); a wooden bathhouse with dressing rooms to the rear of the cabins (#665450); two toilets on the bank of Bright Angel Creek (now gone); a combined coal and wash house (#55576); and a hay shed (now gone) (Cleeland 1986, 45).
1925	AD			Destroyed	A portion of the Kaibab Trail (later designated the South Kaibab Trail) was destroyed by heavy rains in early September, resulting in the temporary closure of the trail. Park Superintendent

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					J. R. Eakin stated in a letter NPS Director Mr. Mather that, although regional newspapers reported that the Yaki Point section of the Kaibab Trail (later designated the South Kaibab Trail) had experienced serious washouts, the Trail had actually experienced little damage. The papers also reported that parties were detoured for "several days" over to the "old reliable Bright Angel Trail," which Eakin clarified was "one day only" and "merely a precaution." Eakin also clarified that he and his party encountered only one small slide during his survey of the trail (Eakin 1925).
1925	AD	1929	AD	Established/ Built	The NPS approved a proposal by the Fred Harvey Company to construct several structures on a 10-acre site at Yaki Point near the Kaibab Trailhead (later the South Kaibab Trailhead) to facilitate guided mule trips to and from Phantom Ranch. A road was constructed to access the area, later known as the South Kaibab Trail access road. Proposed structures included a frame employee residence (#56902), which was built in 1926, and a stone mule barn (#55618), which was constructed in 1929. Stone and concrete cisterns were built in association with both buildings. Between 1927 and 1929, the NPS also constructed numerous buildings at Yaki Point including a frame residence (#57284), a frame garage (#57260), and frame mule shed (#56757). The residence was constructed in 1926, and the garage and mule shed were built in 1929 (Anderson et al. 2010a, 5–6; Sutphen 1991).
1925	AD	1933	AD	Maintained	Between 1925 and 1933, the Kaibab Trail (later designated the South Kaibab Trail) was maintained by two full-time NPS employees. One of the employees covered the upper portion of the trail between the South Rim and the Tip-off, and the other maintained the remaining portion of the trail between the Tip-off and the Colorado River (Sutphen 1991).

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1926	AD			Built	A Delco Light Plant (#55556) was installed to provide electricity at Phantom Ranch. The plant's machinery was housed in an open-sided frame structure supported by rock piers (Cleeland 1986, 45).
1926	AD			Land Transfer	Cameron's mining claims on the South Rim and along the Bright Angel Trail are invalidated by the Federal Government because they were not being actively mined or excavated properly (Hughes 1978, 88).
1926	AD			Built	The NPS erected their first permanent structure at the delta of Bright Angel Creek. The building, which was originally called the Caretaker's Cabin and later designated the Rock House (#55437), consisted of a single room frame building with a masonry foundation and corner piers. According to a 1934 Housing Survey form, the interior of the building contained a built-in sink and tongue and groove interior walls and had a maximum occupancy of two (Anderson et al. 2010, 6; Carter 1934; Cleeland 1986, 55).
1926	AD			Built	The USGS added a combination bathhouse and storeroom outside their residence at the Bright Angel Creek delta, which no longer exists (Cleeland 1986, 54).
1926	AD			Altered/Built	The NPS initiated a construction project along Rust's northern trail route (later known as the North Kaibab Trail), which was then considered an extension of the Bright Angel Trail. The trail was rebuilt according to standards patterned after the South Kaibab Trail. Beginning in 1926, crews widened the trail up to 5 feet, reduced its grades to less than 20 percent, and improved the trail from the south end of the swinging NPS suspension bridge to the North Rim parking area. A 20-foot-long tunnel (Supai Tunnel) was also built through the Supai formation and a rest stop with piped water was constructed near the tunnel. Along the lower section of the trail known today as "The Box," they blasted a new route through the canyon

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					walls to reduce the 50 crossings at Bright Angel Creek to six (Anderson et al. 2010, 3; Berkowitz and Thybony 2005; Skerrett and Tillotson 1926; Webber 1929).
1927	AD			Built	Generator-powered electricity was installed at three of the original, Colter-designed cabins at Phantom Ranch (Cleeland 1986, 42).
1927	AD			Built	The Recreation Hall (#55561) and Shower and Bath House (#55562) were erected by the NPS at Phantom Ranch. The Recreation Hall measured 51 feet by 38 feet and was constructed of wood frame with stone piers. The western two-thirds of the building contained an open recreation room with an exposed beam ceiling and the eastern third had a bathroom with showers. The building also had a large stone fireplace and two, 38-feet-long by 12-feet-wide open porches on its north and south sides. The Shower and Bath House was constructed almost entirely of stone and measured 38 feet by 28 feet (Johnson et al. 1980).
1927	AD			Built	The Fred Harvey Company constructed three stone and wood guest cabins (#55568, 55569, and 55570) adjacent to the Recreation Hall at Phantom Ranch (Cleeland 1986, 45).
1927	AD			Altered	By 1927, a stone and wood frame screened sleeping porch was added to the USGS Operator's Cabin (#55557) at the Bright Angel Creek delta (Cleeland 1986, 53).
1927	AD			Land Transfer	Full control of Indian Garden was transferred from Ralph Cameron to the NPS (JMA 2005, 60).
1927	AD			Developed	The SFRR completed "minor development" at the springs at Indian Garden to monitor their water flow (Hughes 1967, 140).
1927	AD			Built	A cable conveyor system was installed by the Union Pacific Railroad (UPRR) to facilitate the installation of a water pipeline from Roaring Springs to Bright Angel Point on the North Rim (Anderson et al. 2010, 3).

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1927	AD			Built	The NPS established Cottonwood Campground as a layover for mule parties traveling along the North Kaibab Trail between the North Rim and Phantom Ranch. Development of the campground included the construction of a Caretaker's Cabin (also known as the Halfway House, Cottonwood Ranger Station, and Cottonwood Ranger Residence; #9941), in 1927. The building is described on a 1934 Housing Survey form as having a stone foundation, stone piers supporting a shingle roof, a built-in fireplace, wood floors, board and batten construction, and a flagstone terrace. The building had a maximum occupancy of six, and its interior contained a public room, kitchen, and two storage rooms (Berkowitz and Thybony 2005; Carter 1934; Sharrow 1985).
1927	AD	1928	AD	Built/Altered	In 1927, the NPS constructed a new upper section of Rust's northern trail route which turned away from the fault at Roaring Springs Canyon. This section of the trail, which departed from the original trail at Manzanita Creek and followed Roaring Springs Canyon to the North Rim, was completed in the cooler months of 1928. After the new trail section through Roaring Springs Canyon was completed, the NPS re-designated the trail the "North Kaibab Trail" (Anderson et al. 2010, 3; Berkowitz and Thybony 2005; NPS North Kaibab Trail Guide 1970s/1980s; Skerrett and Tillotson 1926; Webber 1929).
1928	AD			Built	The Fred Harvey Company constructed a circular corral comprised of 11 masonry pillars and five two-bedroom cabins (#55563, 55564, 55565, 55567, and 55572) in the same architectural style as those built the previous year at Phantom Ranch (Cleeland 1986, 45; Unknown 1979).
1928	AD			Altered	A major addition was built onto the south end of the original Phantom Ranch Dining Hall (#55575) (Cleeland 1986, 45; Johnson and Crosby 1980).

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1928	AD			Land Transfer	The Coconino County-owned Bright Angel Trail was finally awarded to the NPS for the cost of \$100,000. The trail was deeded to the Federal Government on May 22, 1928. Immediately following transfer of the trail, the \$1.00 toll previously charged by Cameron was rescinded, marking the closure of the last toll road or trail within the NPS (Anderson 1992, 37; Hughes 1967, 137–140; Sutphen 1991).
1928	AD			Established	A dedication ceremony for the Grand Canyon Lodge and the Kaibab Trail (later designated the North and South Kaibab Trails) was held by the Utah Parks Company on September 15, 1928 (Utah Parks Company 1928).
1928	AD			Built	The UPRR dammed Bright Angel Creek below the confluence of the creek and Roaring Springs. From the dammed creek, a sluice carried water downstream to a powerhouse, which created electricity to run a large pump. The pump was used to supply water to the North Rim. This system, with upgrades through the years, has supplied water to the North Rim since 1928 (Berkowitz and Thybony 2005).
1928	AD			Planned	The NPS decided to construct a new bridge (Kaibab Suspension Bridge/Black Bridge) (#9452) across the Colorado River to accommodate the increasing number of tourists utilizing the newly-completed North Kaibab Trail. On January 4, 1928, Chief Engineer Frank A. Kittredge wrote Superintendent Tillotson, indicating that he had secured \$48,000 for the construction of a more rigid structure to replace the 1921 NPS wooden suspension bridge. Plans for the structure were drafted by W. P. Webber of NPS's San Francisco Engineering Division in February 1928. The plans called for the construction of a 500-foot-long by 5-foot-wide steel truss suspension bridge with steel plate floors overlaid with asphaltic concrete. The chosen site was elevated approximately 16 feet above the 1921 bridge which enabled the original bridge

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					to be left intact during construction (Anderson et al. 2010, 7; Karpinski 2003; Kittredge 1929; Young 2008).
1928	AD	1929	AD	Built	NPS crews began construction on the abutments of the Kaibab Suspension Bridge (Black Bridge, #9452) on March 9, 1928. A tent camp was established near the Bright Angel Creek Delta to house workers, and a storage yard, assembly platform, and canvas-covered blacksmith shop were set up at the terminus of the South Kaibab Trail for tools and equipment. Due to the site's remote location, all of construction materials, including the one-ton, 550-foot-long suspension cables for the bridge, had to be packed into the canyon using manpower and mules. To access the new bridge from the south, crews blasted a 105-foot-long by 10-foot-high by 6-foot-wide unnamed tunnel through the granite walls of the canyon. Following completion of the structure on August 3, 1928, the original bridge was dismantled and packed out of the canyon by mule. The final cost of the Kaibab Suspension Bridge (Black Bridge) was \$39,500 (Anderson et al. 2010, 7; Karpinski 2003; Young 2008).
1928	AD	1933	AD	Maintained	The North Kaibab Trail was maintained by seasonal workers and one full-time employee hired by the NPS. The full-time employee was responsible for the segment from the mouth of Bright Angel Creek through "The Box" (as well as the lower portion of the South Kaibab); the seasonal workers maintained the trail from the Box to the North Rim (Anderson et al. 2010, 3).
1929	AD			Maintained	In an NPS Memorandum dated November 2, 1929, Acting Park Superintendent P. P. Patraw noted numerous locations along the North and South Kaibab Trails that required maintenance due to summer rains and heavy use of the trail during construction at Phantom Ranch. Papaw noted that "a shortcut" had been made on the South Kaibab Trail which

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					eliminated the last switchback before the Tip-off. He also reported damage along the North Kaibab Trail between the Powerhouse and Roaring Springs due to "trucking" by the UPR during their pipeline construction at Roaring Springs. According to Patraw, the UPRR was expected to pay for the reconstruction of trail in this area (Patraw 1929).
1929	AD	1930	AD	Reconstructed/ Built	Park Superintendent M. R. Tillotson and Park Engineer C. M. Carrel allocated \$20,000 for reconstruction of the Bright Angel Trail. Between 1929 and 1930, NPS crews built a new 2.09-mile-long segment of trail from Indian Garden to Pipe Creek. The new alignment followed the east and south banks of Garden Creek through the Tapeats Narrows and across Salt Creek before descending a new series of switchbacks, referred to as the "Devil's Corkscrew," approximately 50 feet from the terminus of the old trail alignment. The old alignment of the Bright Angel Trail, which proceeded east along the Tonto Plateau from the northern end of Indian Garden, is still visible west of Pipe Creek (Anderson 1992, 37–38; Anderson 2002a, 5).
1929	AD			Planned	NPS officials, including Park Superintendent Tillotson, Assistant Park Superintendent P. P. Patrow, and Park Engineer Carrel explored the feasibility of constructing a new inner canyon corridor trail (Colorado River Trail) which would connect the Bright Angel Trail and South Kaibab Trails to the south of the Colorado River (Purvis 1989, 96).
1930s	AD			Established	The NPS operated a fish hatchery at the Roaring Springs powerhouse for the introduction of rainbow trout into Bright Angel Creek. This paved the way for the creek to become a fishing destination for those using the North Kaibab Trail (Berkowitz and Thybony 2005).

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1930s	AD			Demolished	During the early 1930s, the Cameron-era structures at Indian Garden including the stone house, canvas and frame tents, and the Kolb brothers' photography studio were razed (Anderson 1998, 74).
1930	AD	1931	AD	Reconstructed/ Built	Between October 1930 and May 1931, the NPS completed most of the reconstruction of a segment of the Bright Angel Trail between Indian Garden and the South Rim near Kolb Studio (#7666). The completed trail segment had an average grade of less than 13 percent, with a maximum of 17 percent. The trail was built to a standard width of 4 feet and required extensive reconstruction of Jacob's Ladder and the tunnel (Anderson 1992, 38; Anderson et al. 2002, 6).
1931	AD			Reconstructed/ Built	The NPS relocated and reconstructed the upper section of the Bright Angel Trail and built four rest houses—1.5-Mile (#9446), 3-Mile (#9447), Indian Garden (#9448), and the River (#55443) Rest Houses—along the trail (Anderson 2002a, 5).
1931	AD	1932	AD	Built/Removed	A cable tramway was constructed from the South Rim to Indian Garden to transport materials for the construction of a new water system. The tramway was located adjacent to Indian Garden on an eastern slope near the current location of the 3-Mile Rest House. A total of 2.5 miles of 6-inch-diameter water pipe was laid for the new system. Upon completion of the system in 1932, the tramway was removed (Anderson 1998, 74; Anderson 2002a, 6).
1932	AD			Built	The SFRR constructed a Rehandling Pumphouse (#55390) and 70,000-gallon reservoir within the Garden Creek drainage near Indian Garden. The facility served to collect water at Indian Garden and pump it to the upper pumphouse at the South Rim. Also during this time, the NPS built a two-room stone and frame Caretaker's Cabin (#9442) at Indian Garden and two latrines to the north of and downstream from the Caretaker's Cabin

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					for visitors. Additionally, 350 feet of electrical line was installed from the Caretaker's Cabin to the Santa Fe Pump Station (Anderson 2002a, 6–7; JMA 2005, 92).
1932	AD			Built	A 1932 NPS map shows three earthen terraces near the Caretaker's Cabin (#9442) at Indian Garden. The earth was retained by an 18-inch-high stone wall on its northern, downslope side. It is not known whether these terraces were Cameron-era structures or whether they were built by the NPS at the time the Caretaker's Cabin was constructed (Anderson 2002a, 6).
1932	AD	1937	AD	Maintained	Portions of the Bright Angel Trail were hand and machine-oiled to reduce dust levels along the trail. It is not known if the portion of the Bright Angel Trail that passed through Indian Garden was oiled. During this time, the NPS did not undertake any major trail improvements (Anderson 2002a, 6).
1932	AD	1940	AD	Established	On June 8, 1932, Payson resident Rose E. Collum sent a letter to Park Superintendent M. R. Tillotson expressing interest in helping to inventory plants at the Grand Canyon. Tillotson answered Collum's letter on June 20, 1932, thanking her for her offer of assistance and suggesting that the "force of Naturalists regularly employed" at the canyon would be glad to have her voluntary assistance. Shortly thereafter, Collum became involved in the identification of plants along the North and South Kaibab Trails and at Phantom Ranch. By November 1940, Collum had submitted more than 132 specimens to the Smithsonian Institution for identification, study, and inclusion into a National Herbarium (GRCA Archive #52846).
1933	AD			Planned	On March 30, 1933, Assistant Architect Harry Langley, Park Superintendent Miner Tillotson, and Resident Engineer E. F. Strickler looked for camp sites along Bright Angel Creek to accommodate hikers and fishermen. After considerable study, they selected

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					a location for a large campground (now known as Bright Angel Campground) to the west of the creek, approximately 0.3 mile south of the Fred Harvey mule corral at Phantom Ranch. They planned to clear the site of boulders, plant cottonwood trees, and build two stone pit toilets, a 900-foot buried water pipeline, picnic tables, fireplaces, and a bridge across the creek. Four additional sites were chosen along the creek approximately 2.5 miles and 3.3 miles above Phantom Ranch, near Ribbon Falls, and at the present-day site of Cottonwood Campground. Structures planned for these locations included a table, fireplace, and pit toilet. Completion of the camps would create a total of six camp sites at the canyon, since one camp already existed at Roaring Springs (Langley 1933).
1933	AD			Established	On March 31, 1933, President Franklin Roosevelt created the Civilian Conservation Corps (CCC) through the Emergency Conservation Work Act in an effort to speed economic recovery and provide work for thousands of unemployed young men on the nation's public lands (Booth 1991, 7; Purvis 1989, 17).
1933	AD			Established	The first CCC camp (NP-1-A) was established at the Grand Canyon in Neil Springs Canyon on the North Rim in May 1933. In July, the camp was moved to Bright Angel Point on the South Rim due to unfavorable conditions at the Neil Springs site (Booth 2005, 73; Purvis 1989, 22).
1933	AD			Planned/ Established/ Built	On October 7, 1933, 45 enrollees of CCC Company 818 arrived at the bottom of the canyon to begin construction on a new CCC camp (NP-3-A) near Phantom Ranch in the present-day location of the Bright Angel Campground. The next morning, enrollees began clearing the area of boulders and debris, and hauled them to the banks of the creek to prevent erosion. Construction of the camp was completed on October, 31, 1933. The

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					finished camp contained 25 enrollee's quarters, four officer's quarters, two foreman's quarters, an orderly tent, an infirmary, a library, a kitchen and mess hall, a canteen and recreational hall, a latrine, a supply tent, a spring house, and an unloading area. The following month, the enrollee strength of the camp was increased to 179. Most of the enrollees were from Arizona and Texas (Audretsch 2011, 31–32; Cleeland 1986, 55; Langley 1933f; Purvis 1989, 37–41).
1933	AD			Established	Activities for CCC enrollees at Camp NP-3-A included elementary and high school-level classes in English, writing, arithmetic, spelling, and first aid. George M. Shields, the camp blacksmith, also taught classes in singing and music, which were held on Friday evenings and after religious services. The camp celebrated Armistice Day, Thanksgiving, and Christmas, each of which included a special dinner followed by boxing, wrestling, and a musical program. There was also a library and recreation hall which offered games such as playing cards, jigsaw puzzles, dominoes, checkers, and chess. Recreational activities included basketball, baseball, volleyball, and silent films. Company 818 also published a camp newspaper, known as <i>The Ace in the Hole</i> , which contributed to camp morale and kept the enrollees informed of camp activities (Cleeland 1986, 56; Purvis 1989, 47).
1933	AD			Planned	NPS Assistant Architect, Harry Langley noted that several projects were being contemplated for CCC workers stationed at Camp NP-3-A. These included the development of campgrounds along Bright Angel Creek, a bridge to the public campground (presently the Bright Angel Campground), a bridge to the USGS cabins near the delta of Bright Angel Creek, and several other projects associated with Phantom Ranch and its surrounding trails. A new USGS

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					Gauging Station was also planned for the south side of the river, with a new foot trail on the north side of the river, and a cable crossing. The planned features had been reviewed in the field and work was proposed to begin shortly. It is unclear if these plans were carried out or abandoned (Langley 1933a, Langley 1933b).
1933	AD			Established/ Inhabited	The U.S. Army's 7th Pack Train, comprised of regular army enlistees and civilian packers, arrived at the South Rim, along with 60 mules, in September 1933 to supply CCC enrollees stationed at Camp NP-3-A. The men camped until permanent buildings were erected at Yaki Point to house them (Audretsch 2011, 32; Purvis 1989, 65–68).
1933	AD			Planned	On October 7, 1933, Landscape Architect Alfred C. Keuhl visited Phantom Ranch to study and prepare a preliminary sketch for a proposed swimming pool. NPS Assistant Architect Harry Langley and Park Superintendent Tillotson met with Keuhl the following day at the ranch to study the layout together. The sketch included an irregular-shaped pool, which measured approximately 35 feet by 70 feet in size, to be built immediately north of the Recreation Hall. An adjacent comfort station was proposed to be used as a dressing room. Tillotson decided that the project should be sponsored by the NPS, and planned to request CCC labor for the work. The Fred Harvey Company agreed to pay for all the necessary materials needed for construction (Langley 1933f).
1933	AD			Planned	On October 8, 1933, Langley and Tillotson selected a site for a residence, known as the Packer's Cabin (now known as the River Ranger Station) (#55420), adjacent to an existing cabin at the Bright Angel Creek delta (Langley 1933f).

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1933	AD			Developed	The public campgrounds near Phantom Ranch and along Bright Angel Creek were also improved by the work of the CCC enrollees, which included grading, leveling, and irrigation ditch construction for the cottonwoods they planted at the campgrounds. Trees and shrubs were also planted along Bright Angel Creek. Grading and soil preparation were likewise undertaken at the trail Caretaker's Cabin (also known as Rock House; #154) and the Packer's Cabin (#91) near the mouth of Bright Angel Creek, for the purpose of tree and shrub plantings. Enrollees also worked to change the channel of Bright Angel Creek for a short distance, including the addition of riprap to the creek edges for erosion control. The Kaibab Suspension Bridge (Black Bridge) was also re-painted with a spraying machine, which required 65 gallons of paint (Sevey 1934, 1935a; Unknown 1934; Lloyd 1940).
1933	AD			Built	The CCC erected a cable tramway across the Colorado River west of the Bright Angel Creek Delta as a means of gathering driftwood from a sandbar on the south side. The tram later became useful for transporting men across the river to work on the Colorado River Trail (Cleeland 1986, 56).
1933	AD			Removed	The CCC obliterated a series of switchbacks near the Bright Angel Trailhead that descended southwest from Kolb's studio to the second tunnel. The original alignment of the trail is still visible from the Trail Overlook along West Rim Drive (Anderson 1992, 39).
1933	AD			Built	Between August and October 1933, a roadside parking area was constructed by CCC crews at the North Kaibab Trailhead, taking advantage of the excellent views of Bright Angel Canyon. A second parking lot, also planned for the area, was not constructed during this time due to the small number of CCC workers available during those months (Stephenson 1933).

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1933	AD			Removed/ Naturalized	By November 1933, CCC crews had obliterated nearly 2 miles of the old South Kaibab Trail from the Tip-off to the Kaibab Suspension Bridge (Black Bridge, #9452) (Haines 1934).
1933	AD	1936	AD	Built	In December 1933, CCC enrollees stationed at Camp NP-3-A began construction of a new 2-mile-long inner canyon trail that connected the Bright Angel and South Kaibab Trails. Construction of the trail was accomplished in four sections. The first two segments of trail, which stretched from the terminus of the Bright Angel Trail to the sand dune area, were completed between January and June of 1935. In June 1935, CCC enrollees completed the easternmost 0.4-mile section of the trail, or third segment, through the sand dunes. The fourth section of the trail, which extended from the South Kaibab Trail toward the present-day location of the Silver Bridge, was completed on January 20, 1936. The trail was designated the Colorado River Trail, and shortly after its completion, Fred Harvey packer Shorty Yarberry made the inaugural trip along the trail from the South Rim to Phantom Ranch (Anderson 1998, 74; Anderson and Sutphen 1992; Purvis 1989, 96–113).
1933	AD			Planned/ Reconstructed	Superintendent of Camp NP-3-A, J. W. Haines reported that CCC crews were approved to begin reconstruction on the existing Trans-canyon telephone line. The project would include new lines along the Colorado River Trail to replace the old lines which were hung from existing trees. Permanent metal poles and stubs were planned to be installed for the new line. In 1933, the CCC began construction on a 3.5-mile-long segment of the telephone line from the foot of the Bright Angel Trail along the Colorado River Trail to the Kaibab Suspension Bridge (Black Bridge, #9452), and south from the bridge up the South Kaibab Trail to the Tip-off. Construction also commenced on a

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					second 13-mile-long telephone line that stretched from the Colorado River Trail, across the Kaibab Suspension Bridge, and up Bright Angel and Roaring Springs Canyons to the North Rim (Sevey 1935a; Haines 1934).
1933	AD	1942	AD	Planted	An NPS Inspection Report indicates that the CCC planted approximately 50 cottonwood and boxelder cuttings to the south of Camp NP-3-A between 1933 and 1942. This area is now part of the Bright Angel Campground (NPS Inspection Report n.d.).
1933	AD	1942	AD	Maintained	Between 1933 and 1942, the North and South Kaibab Trails were maintained by CCC workers under supervision of GRCA park rangers. During this time, CCC workers performed much needed repairs on the trails which had been delayed by budget shortages caused by the Great Depression. Projects completed on the South Kaibab Trail alignment included debris removal from rock slides and run-off, drainage and diversion building and repair, multiple trail removal, re-vegetation, and tread/surfacing maintenance. On the North Kaibab Trail, CCC workers completed numerous trail maintenance projects, including side trail ditching, clearing rock slides, repairing erosion damage, installing and repairing water bars, and maintaining a stable trail tread. They also performed emergency snow removal from upper portions of the trail (Anderson et al. 2010, 3; Sutphen 1991).
1934	AD			Established	Camp NP-3-A was ranked the best CCC camp out of 54 camps established in the Arizona-New Mexico District (Cleeland 1986, 56).
1934	AD			Abandoned	Camp NP-3-A was temporarily abandoned on May 15, 1934 and personnel were moved to Camp NP-1-A on the North Rim (Sevey 1934; Unknown 1934).
1934	AD			Established	An August 31, 1934 edition of the <i>Arizona Republican</i> newspaper reported that CCC Camp NP-3-A had "the distinction of being the most difficult to

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					supply" of any of the CCC camps in the system. The newspaper also noted that during the previous winter, "several mules were lost by falling off the trail [South Kaibab Trail] and plunging thousands of feet down to the bottom" (Audretsch 2011, 33).
1934	AD			Conserved	Landscape Architect Alfred C. Keuhl was placed in charge of all landscape work on the South Rim and at Phantom Ranch, with assistance from Charles D. Carter, Jr. Landscape foreman; H. C. Edinborough, Planting Foreman; and E. E. McKown, Landscape Foreman. Keuhl reported to Assistant Architect Harry Langley, who reported to the Chief Architect (Langley 1934).
1934	AD			Built	The USGS built a second gauge well slightly upstream and across the Colorado River from the USGS recorder tower. To access the well, the CCC constructed a short spur trail from the Kaibab Suspension Bridge (Black Bridge, #9452) along the north side of the Colorado River to a cable used for transporting the hydrographer across to the new well (Anderson et al. 2010, 6; Cleeland 1986, 57).
1934	AD			Built	The Packer's Cabin (#55420), or River Ranger Station as it is known today, was constructed by the CCC in the Bright Angel Creek Delta on the same elevation as the Rock House (#55437). Small shed-roofed bathroom additions were soon added to both of the buildings (Anderson 1998, 149).
1934	AD	1935	AD	Built	Beginning in November 1934, CCC enrollees surveyed and cleared right-of-way along the Bright Angel Trail to the Colorado River for the installation of a new Trans-canyon Telephone Line (#55623). The following month, workers began to set poles, and by March 1935, the telephone line was completed as far as Phantom Ranch. Between March and September, CCC workers installed the remaining 13-mile-long section up Bright Angel Canyon to the North Rim. The completed line stretched 25 miles and consisted of a single telephone line

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					hung from poles that were constructed of two-inch galvanized pipe. Under the direction of Landscape Architect, Langley, the poles were painted a complimentary color to blend with the surrounding rock formations of the canyon (Anderson 1998, 7; Cleeland 1986a; Cleeland 1986b, 54; Purvis 1989, 87; Tillotson and Sevey 1935, 2).
1934	AD	1935	AD	Established	Side camps were established at Indian Garden and Cottonwood Campground for CCC laborers installing the Trans-canyon Telephone Line (#55623) (Anderson 1998, 7; Cleeland 1986a; Cleeland 1986b, 54; Purvis 1989, 87; Tillotson and Sevey 1935, 2).
1934	AD	1936	AD	Built/Excavated	Under the supervision of Landscape Foreman Charles D. Carter, a crew of 20 CCC enrollees built a swimming pool at Phantom Ranch. The pool, which was located in a boulder-filled floodplain north of the Recreation Hall (#55561), was fed by water from Bright Angel Creek. Excavation of the pool was accomplished entirely by hand and without machinery. Although CCC reports written by Landscape Architect Kuehl in the 1930s indicated that construction of the pool would be finished by June of 1934, the pool was not completed until 1936. CCC enrollees were among the first to enjoy the pool, and for many years, the pool was a centerpiece of the ranch (Cleeland 1986, 47; Anderson 1998; Kuehl 1934; Langley 1934a).
1934	AD	1936	AD	Built	Construction of the Upper Ribbon Falls Trail commenced in December 1934, under the supervision of CCC foreman, Nicholas Duncan from a spur camp at Cottonwood Campground, and was completed in January 1936. The 1-mile-long trail was designed for "limited use" and described as "narrow and steep in spots." It required 525 enrollee man-days to build (Audretsch 2011, 41).
1935	AD			Stabilized/Planted	In an effort to control damage resulting from the periodic flooding of Garden Creek, the NPS built rip-rap walls along the creek channel and reinforced

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					existing tent platforms at Indian Garden with rock. Following stabilization of the channel, the NPS planted what they believed to be native vegetation such as "willow, grapes, blackberry, raspberry, burro bush, and redbud" along the banks of Garden Creek. Of these plants, only willow, burro bush, grapes, and redbud are considered native to the Grand Canyon region. They also planted cottonwood trees to supplement and eventually replace the Cameron-era cottonwoods at Indian Garden and excavated two irrigation ditches in the Garden Creek floodplain for watering the new plants (Leonard et al. 2010, 38–39).
1935	AD			Built	The CCC constructed a Mule Shelter and Corral (#9451) for the NPS within the Bright Angel Creek delta. Plans drafted by the NPS in March 1935 show the corral and shelter as a circular frame and masonry structure located approximately 200 feet north of the Colorado River. The northwestern portion of the structure had an arched, open-air mule shelter that was flanked on its north and west ends by a feed storage room and saddle room. The mule shelter had a dirt floor, while the enclosed rooms had concrete floors. The remaining portion of the structure was enclosed by a steel rail fence with masonry posts. A rectangular stone feed trough was located in the center of the fenced area, and an arched water trough was planned immediately north of the westernmost gate. A "proposed" trail looped around the southern half of the structure and extended east to the Packer's Cabin (now known as the River Ranger Station, #55420) (Anderson 1998, 149; Cleeland 1986b, 58).
1935	AD			Built	The NPS built a Comfort Station at Phantom Ranch. The building had small stone piers and board and batten walls. The building replaced an earlier comfort station that was located near the bunkhouse (Johnson et al. 1980).

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1935	AD			Built	The USGS erected a stone and wood frame silt laboratory (#55557) south of their employee's residence at the Bright Angel Creek delta (Anderson et al. 2010, 6).
1935	AD			Inhabited	CCC enrollees of Company 818 returned to Camp NP-3-A on September 29, 1935 (Lloyd 1940).
1935	AD	1936	AD	Constructed/Destroyed	Between March and April 1935, the CCC built a foot bridge, known as the Rock House Bridge (#55622), as well as a second unnamed bridge further north of the Rock House (#55437) within the Bright Angel Creek delta. Both of the bridges were supported by cables that were strung from large masonry piers. The unnamed bridge, which crossed the creek from Phantom Ranch directly to CCC Camp NP-3-A, was eventually washed away by flooding in 1936 (Anderson et al. 2010, 5; Carrel 1940; Cleeland 1986b, 58; Kuehl 1936).
1936	AD			Abandoned	In April 1936, Company 818 prepared to abandon Camp NP-3-A. Enrollees dismantled tents and buildings which were eventually hauled to the South Rim by the U.S. Army's 7th Pack Train and returned to Fort Huachuca. On May 18, 1936, the camp was permanently abandoned by the CCC. Following their abandonment, the camp was converted into a recreational campground as originally intended (Audretsch 2011, 48; Lloyd 1940).
1936	AD			Cultivated	Superintendent Tillotson approved a request by the Fred Harvey Company to plant crops in the vicinity of the Bright Angel Campground. Tillotson recommended that the company cultivate alfalfa in the area rather than fruit trees so that campers would not be tempted to eat the fruit (Tillotson 1936f).
1936	AD			Built	By 1936, increased visitation at Phantom Ranch put a strain on the existing sewage facilities, which were then comprised primarily of pit toilets. In response, the SFRR installed a new sewage system which consisted of a single cast-iron pipe supported in some places by rock piers (#57212). The pipe

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					ran from Phantom Ranch to the Colorado River west of Bright Angel Creek, where it expelled raw sewage directly into the river (Cleeland 1986b, 47).
1936	AD			Planned	A 1936 NPS map of Indian Garden denotes a "Garden Area" surrounded by a stone wall and stairway. It is not known if this area was intended to produce edible crops, or if the term "garden" was meant to convey a shaded seating or picnic area for tourists. Later plans drafted in the 1950s and 1960s show a campground and picnic area in this location (JMA 2005, 87).
1936	AD			Built	The SFRR constructed a frame cabin for the pump caretaker to the west of and adjacent to the NPS Caretaker's Residence (#9442) at Indian Garden. They also installed an electrical line from the newly-constructed residence to the Pumphouse (#55389) during this time (Anderson 2002a, 6–7).
1936	AD			Destroyed	On August 19, 1936, heavy rains on the North Rim caused Bright Angel Creek to rise 12 feet above its normal water elevation causing the destruction of approximately 75 percent of the North Kaibab Trail. The flood waters washed away a 12-mile-long section of trail on the east bank of the creek from the Kaibab Suspension Bridge (Black Bridge) to the top of the Supai Sandstone Formation, thereby obstructing access to Phantom Ranch. No plans were made for the reconstruction efforts, as they were considered to be "emergency work." The greatest damage took place where the trail was constructed around ledge points with outside walls of dry-laid rubble masonry (Carel 1938).
1936	AD	1938	AD	Reconstructed	The NPS began its reconstruction efforts along the North Kaibab Trail on November 6, 1936. As part of the reconstruction effort, a work crew comprised of a foreman and six laborers built a new 6-foot-wide trail that was benched into the adjacent rock cliff.

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					Other reconstruction efforts included clearing out rock slides, repairing outside shoulder walls, cleaning out water breaks and ditches, refinishing trail tread, repairing dry stacked retaining walls, replacing dry stacked walls with wet-laid masonry walls, and creating creek channel changes to divert the stream away from the reconstructed trail. New benches were also blasted into the cliff walls through "The Box" in order to lift the trail to a higher grade and remaining sections of the trail were obliterated to keep hikers from using them. Reconstruction of the trail was completed on July 14, 1938. A total of \$30,000 was allotted for the work from the roads and trails budget, of which \$27,778.30 was used (Carrel 1938).
1936	AD	1938	AD	Established	A 30-man camp was established at Bright Angel Campground to house trail crews during reconstruction of the North Kaibab Trail. The camp, which consisted of two cabins, a mess hall, and a number of tents, was home to a foreman, sub-foreman, powderman, compressor man, two jackhammer operators, a stone mason, and 18 to 20 laborers. Small spur camps were also established at Cottonwood and Roaring Springs Campgrounds for trail crews working on the north end of the North Kaibab Trail in 1937 (Carrel 1938).
1937	AD			Destroyed/Reconstructed	A fire burned the wooden roof and supports of the NPS Mule Barn and Corral (#9451) located near the Colorado River within the Bright Angel Creek delta. The damaged roof was quickly replaced by CCC enrollees (Cleeland 1986b, 58).
1937	AD			Built	The Indian Garden Rest House (#9448) was built by the CCC (Anderson 1998, 74).
1937	AD			Relocated	A 400-foot section of the Bright Angel Trail in the vicinity of Indian Garden was relocated (Anderson 2002a, 6).

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1937	AD			Built	Numerous buildings and structures were erected at Indian Garden including a stone and frame mule barn and stone corral upstream and south of the NPS Caretaker's Residence (#9442), a "trail-side exhibit" at an unknown location, and a stone and frame trail shelter with benches and a water fountain adjacent to and west of the Bright Angel Trail (now known as the River Rest House) (Anderson 2002a, 7; GRCA 29888 Accession 1195, ECW Trailside Shelters, 1936–1937; Hughes 1967, 170).
1938	AD			Developed	The Phantom Ranch swimming pool was showcased in a 1938 United States Department of the Interior publication. The publication, which included numerous recreational and cultural facilities located in National Parks across the nation, included a photograph and plan-view drawing of the Phantom Ranch swimming pool. The feature was described as an "artificial swimming pool" with "naturalistically fabricated rocky banks." The drawing indicates that the pool had a channelized overflow and springboard at its north end and an inlet at its south end. A stone and wood fence was present to the west of the pool (Good 1938, 125).
1938	AD			Planted	Superintendent Tillotson approved a Fred Harvey Company proposal which requested the addition of 18 new peach trees to their existing orchard at Phantom Ranch (Tillotson 1938f).
1938	AD			Expanded	The SFRR initiated improvements to the facilities and equipment in its Rehandling Pumphouse and reservoir at Indian Garden (Anderson 1998, 74).
1938	AD	1939	AD	Reconstructed/ Built	On February 1, 1938, CCC crews began reconstructing the third and last segment of the Bright Angel Trail from the base of the new Devil's Corkscrew to the junction of the recently completed Colorado River Trail at the mouth of Pipe Creek. Construction of the trail segment was completed in 1939 (Anderson et al. 2002, 6).

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1938	AD	1939	AD	Built/Reconstructed	The existing poles of the CCC-constructed Trans-canyon Telephone Line (#55623) were upgraded and modified by the addition of a second circuit and new cross-arms (Anderson 2002a, 6; Cleeland 1986a; Cleeland 1986b, 54).
1942	AD			Expanded	The SFRR improved the Rehandling Pumphouse (#55390) and reservoir at Indian Garden again, this time excavating a new well and tunnel approximately 40 feet north of the existing facility (Anderson 2002a, 6).
1942	AD			Abandoned	CCC enrollees working on a number of improvement projects in the Grand Canyon, including the reconstruction of the Bright Angel Trail, are disbanded when the relief program is terminated by the U.S. Congress on June 30, 1942 due to the nation's involvement in World War II. After this date, maintenance of the Bright Angel Trail, South and North Kaibab Trails, and the Colorado River Trail reverted back to the NPS (Hughes 1967, 144; Sutphen 1991).
1942	AD	1943	AD	Destroyed/Built	In 1942, the SFRR Pump Caretaker's Residence at Indian Garden was destroyed by fire. Another building (#9440), constructed entirely of native stone, was erected by the SFRR in the same location as the razed structure in 1943 (Leonard et al. 2010, 41; Anderson 2002a, 6).
1946	AD			Built	Septic tanks were installed to handle increasing volumes of sewage at Phantom Ranch. The stone piers originally constructed to support the above-ground sewer line were used to carry water pipelines leading from huge holding tanks located on the cliffs above the ranch to government buildings on the Bright Angel Creek delta (Anderson et al. 2010; Cleeland 1986b, 47).
1946	AD			Altered/Built	The SFRR converted showers to toilets in eight of the guest cabins (#55563-55565, 55567, and 55571-55574) at Phantom Ranch. The alterations changed the appearance of the 1928 cabins minimally, since the small board and batten cubicles built into the

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					external walls were simply enlarged; however, the 1922 cabins required more extensive remodeling. Additionally, evaporative coolers were installed, which further altered the appearance of the guest cabins (Cleeland 1986b, 50).
1946	AD	1959	AD	Established	The end of the World War II led to increased tourism at the Grand Canyon. Demand on the North Kaibab Trail consequently increased, and the route became more of an "ambitious hiking trail" than a scenic transportation corridor. This functional shift was evident in 1949, when Harry E. Braun was reported to have hiked from the South Rim to the North Rim, and then back to the South Rim in a record 21 hours and 50 minutes (Anderson 2000; Sutphen 1992).
1947	AD			Altered/Built	The SFRR spent \$6,000 to restore the shower house (#665450) at Phantom Ranch. It is likely that the original board and batten walls of the building were filled in with rock during this time (Anderson et al. 2010, 6; Cleeland 1986b, 49).
1947	AD			Built	The USGS built a Light Plant, or generator house, at the Bright Angel Creek delta to house a gasoline-powered generator. The frame structure cost \$300 to build and consisted of a single, 28-square foot room (NPS 1960; Cleeland 1986b).
1947	AD			Altered/Built	The USGS laboratory (#55557) at the Bright Angel Creek delta was remodeled to include two rooms and 312 square feet of space. The laboratory was used for determining the silt load of the Colorado River. This structure was identified in a 1960 building inventory as Building #869, constructed in 1923; however, this date conflicts with archival data, which indicates that Building #869 is the 1922 STP Operator Cabin/USGS Employee Residence (Cleeland 1986b; NPS 1960).

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1947	AD			Built	The USGS constructed a residence at the Bright Angel Creek delta for their hydrographer. The 264-square foot metal structure, which cost approximately \$6,000 to build, had masonry veneer on its exterior and a painted aluminum roof. The structure was identified as Building #870 in a 1960 NPS building inventory, but was removed at an unknown date (NPS 1960).
1947	AD			Built	The USGS constructed a storage facility (#55558), currently known as the Nursery Shed at the Bright Angel Creek delta for a cost of \$800. The structure was built of native rock and unfinished lumber. Archival data suggests that this structure may have been built as early as 1942 (NPS 1960; Cleeland 1986b).
1950	AD	1959	AD	Built/ Demolished	Beginning in the 1950s, the NPS began to take steps to maintain the landscape and natural setting of the Phantom Ranch area. In keeping with a policy of preservation, new construction in the area was kept to a minimum, and buildings and structures that did not exhibit characteristics of the NPS Rustic architectural style were razed (Simpson 1979).
1950	AD	1969	AD	Altered	1950 to 1960s. Plans drafted by the NPS during the 1950s and 1960s depict a campground and picnic area surrounded by a stone wall in the location of the old "Garden Area" within Indian Garden. This marked a change in land use for the area (JMA 2005, 87).
1952	AD	1959	AD	Planted/Built/ Retained	A 1952 NPS map (Grand Canyon Museum Collection #2118A, on file at the GRCA Archives) shows a leaching field upslope and west of the latrine sludge trench at Indian Garden. The map also depicts numerous structures including a tent frame to the north of the rebuilt SFRR Pump Caretaker's Residence; two retaining walls between the mule barn and corral and the NPS Caretaker's Residence; a "lawn" area to the east of the NPS Caretaker's Residence; a tool shed to the north of the rebuilt SFRR Pump Caretaker's

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					Residence; and a “water catchment” to the southeast of the mule barn and corral. The walls were built between 1952 and 1959 to channel a western drainage to Garden Creek; the age of the remaining structures is unknown. Additionally, the map indicates that a blackberry thicket was cultivated to the north of the picnic area and mule hitching posts and cacti were planted east of the Bright Angel Trail between the NPS Caretaker's Residence and the trail shelter (Leonard et al. 2010).
1957	AD			Destroyed	On August 9, 1957, trails, water systems, and sewer lines were damaged when heavy rains caused extensive flooding at the Grand Canyon. The water systems at the Cottonwood Ranger Station (#9441), Phantom Ranch, the Rock House (#55437), and the USGS Residence (#55557) were badly damaged. Additionally, the sewer system serving Phantom Ranch and Rock House was damaged by moving boulders and driftwood, and emergency measures were taken to prevent raw sewage from leaking into Bright Angel Creek. The Rock House Bridge (#55622) was also destroyed, and large boulders rolling down the creek severely damaged pipes and irrigation systems that crossed the creek. The corral at Cottonwood Camp was swept away by flood waters, as was much of the North Kaibab Trail through “The Box.” The flood caused a peak flow of 2,000 cubic feet per second (cfs), in contrast to the 17 cfs at which the creek normally flowed prior to the rains (Conn 1957).
1960	AD			Altered/Built	A two-room addition was added to the west facade of the Rock House (#55437) at the Bright Angel Creek delta. During construction, two original stone columns were removed and a stone porch was built (Anderson 2002a, 6).
1960	AD	1969	AD	Altered/Built	Additional rooms were added to the Packer's Cabin (now known as the River Rest House, #55420) sometime in the 1960s (Anderson et al. 2010, 6).

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1960	AD	1969		Established/ Exploited	Visitation to Grand Canyon National Park increased greatly during the 1960s. As the South Rim's Grand Canyon Village became the hub of tourist activity at the canyon, the demands of visitors strained the existing water supply (Berkowitz and Thybony 2005).
1960	AD	1969		Exploited	Use of the pool at Phantom Ranch increased greatly during the 1960s and began to present maintenance and health problems (Cleeland 1986, 49).
1960	AD	1969		Built	The NPS erected a gabion wall along Garden Creek at Indian Garden sometime in the 1960s to prevent damage of the surrounding areas due to flooding (Leonard et al. 2010, 53).
1960	AD	1969		Built	The Silver Bridge was constructed at the western terminus of the Colorado River Trail just below the mouth of Bright Angel Creek. Construction of the bridge facilitated travel by reducing the trek from the Colorado River Trail to Phantom Ranch by one mile (Anderson et al. 2010, 7; USDI/NPS NRHP Property Documentation Form n.d; Youngs 2008.).
1960	AD	1961	AD	Built	The Bright Angel Campground was renovated by adding new grills and picnic tables, rehabilitating the original CCC-built comfort station and building a three-bay hikers' shelter called the Adirondack Shelter (Anderson et al. 2010, 7; Cleeland 1986b, 59; Johnson et al. 1980).
1960	AD	1965	AD	Maintained	The leach field located above the sludge trench at Indian Garden was renovated (Leonard et al. 2010, 53).
1960	AD	1979	AD	Developed	The Bright Angel Trail and a spur trail to Plateau Point (known today as the Plateau Point Trail) continued to attract thousands of day and overnight hikers as the popularity of recreational hiking increased during the 1960s and 1970s (Anderson 2002a, 6).
1961	AD			Established	A new campground and picnic area was established in the Cameron-era cottonwood grove at Indian Garden. The area was graded and a new 20-site

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					campground was established, complete with picnic tables, fireplaces, and drinking fountains (JMA 2005, II.106)
1963	AD			Established	The NPS awarded a contract for the construction of a \$3 million Trans-canyon water line from Roaring Springs, down the North Kaibab Trail, and up the Bright Angel Trail to Indian Gardens (Ervin 1986).
1963	AD			Built/ Demolished	A 1963 NPS map (GRCA Archives #60577) indicates that a new pump station and a larger comfort station were built at Indian Garden. The comfort station was connected to the new pump station and replaced the two earlier latrines. The new pump station was connected to the leaching field upslope and replaced the earlier pump station. Additionally, a new footbridge, connecting the picnic area and new comfort station, was constructed at Garden Creek (JMA 2005, II:106).
1963	AD	1964	AD	Maintained	The Rehandling Pumphouse (#55390) at Indian Garden was repaired due to flood damage and new machinery was installed. Following completion of the facility, a masonry wall was constructed around its perimeter (Hughes 1978, 108; Leonard et al. 2010, 54).
1963	AD	1965	AD	Demolished/ Built	The tool shed at Indian Garden was razed for the construction of a new bunkhouse, which was completed in 1965 (Leonard et al. 2010, 54).
1964	AD			Built	A 100-feet-long by 400-feet-wide masonry wall was constructed along the bank of Garden Creek through the campground area at Indian Garden in 1964 (Leonard et al. 2010, 54).
1964	AD			Demolished/ Built	The original board and batten barn at Phantom Ranch burned down and was soon replaced by a stone structure, known today as the Harvey Mule Barn, which continues to serve as a barn (Cleeland 1986, 50).
1964	AD			Built	A large walk-in cooler was installed on the north elevation of the Phantom Ranch Dining Hall (#55575) (Cleeland 1986, 50).

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1964	AD			Planned	In May 1964, GRCA Superintendent Howard B. Strickland announced that plans were being made to bring an additional water supply to the South Rim. Strickland had completed an exploratory site visit with several others ten days prior to his announcement. Landscape Architect Tom DeHaven was among those involved in the site visit (Unknown 1964f).
1965	AD			Established	Flood damages and changes in the operation of the UPRR spurred the NPS to take over management of the water supply system at Roaring Springs (Youngs 2008).
1965	AD			Exploited	The Grand Canyon averaged more than 13,000 visitors per day during the summer of 1965. On two separate days, the number of visitors exceeded 17,000. Increases in park visitation made it increasingly apparent that the park did not have a sufficient water supply on the South Rim (Ervin 1986).
1965	AD			Planned	The NPS entered into an agreement with USGS to prepare plans and specifications for a proposed multi-functional USGS building to serve as a laboratory, office, residence, and informational/interpretive center in the orchard area at Phantom Ranch. Within this agreement, USGS planned to remove the existing residence and laboratory (#55558) at the Bright Angel Creek delta. The building was not constructed (NPS 1965).
1965	AD			Built	In response to the water shortage at the park, NPS hired contractor Elling Halverson-Lent, Inc. to construct a Trans-canyon water pipeline to carry water from Roaring Springs to the South Rim. The pipeline would cross the Colorado River on a newly constructed bridge, later known as the Silver Bridge. The cost of the contract was \$2,277,557.50. Construction of the pipeline commenced in 1965. Although the pipeline ran underground, a sturdy aluminum bridge was built across Bright Angel Creek using the rock piers of the Rock House Bridge (#55622) which was

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					destroyed by flooding in 1957 (Anderson et. al 2010, 7; Bendt 1968; Ervin 1986; Stricklin 1965).
1965	AD	1970	AD	Established	A heliport and an equipment servicing and staging area were established at Yaki Point for use by contractors during construction of the Trans-canyon water pipeline. A gate was installed north of the South Kaibab Trail access road to prevent park visitors and residents from accessing the area (Stricklin 1965).
1965	AD	1970	AD	Established	Inner canyon camps accommodating 25 men were set up 4 miles north of Phantom Ranch and at the NPS Rock House at the Bright Angel Creek delta for work crews building the Trans-canyon water pipeline. A small camp was also planned at Roaring Springs along the North Kaibab Trail for use during construction of the "Powerhouse" (NPS Superintendent's Memorandum No. 2-65; Stricklin 1965).
1965	AD	1970	AD	Established	Directional and warning signs were placed along the North and South Kaibab Trails to provide warning to hikers and mule trains of construction hazards along portions of the trail where construction work was in progress for the Trans-canyon water pipeline (Stricklin 1965).
1966	AD			Destroyed	An immense flash flood swept through the inner canyon, stranding visitors and mules at Phantom Ranch, and destroying numerous buildings and structures including the Bright Angel Campground restroom and septic system; the upper campground bridge, the mule corral at the Bright Angel Creek delta; a wire and rock flood diversion; the old Phantom Ranch guide's quarters/bunkhouse; and the newly-constructed aluminum bridges spanning Bright Angel Creek. Flooding also destroyed many of the 150-year-old cottonwood trees lining the banks of the creek. By the time floodwaters receded, nearly two-thirds of the Bright Angel Campground had been destroyed (Thybonny 2001; Dedera 1967; Ervin 1986; Cleeland 1986, 59).

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1966	AD			Built	The Delco Light Plant (#55556) at Phantom Ranch was made obsolete with the completion of a Trans-canyon power line which ran along the Trans-canyon waterline from Indian Garden (Cleeland 1986, 51).
1966	AD			Destroyed	The USGS lab/residence (#55558) at the Bright Angel delta was again destroyed by fire. The USGS established a new lab and residence (now the Phantom Ranch Ranger Station) up Bright Angel Creek and donated the old residence and storeroom to the NPS. The new lab and residence was constructed of concrete block and was located immediately north of the Trail Crew Bunkhouse (Anderson et al. 2010, 6).
1966	AD	1971	AD	Destroyed/Reconstructed	Contractor Halverson-Lent was awarded a \$1,943,000 contract modification on April 16, 1966 to reconstruct the portions of the Trans-canyon water pipeline and North Kaibab Trail that were damaged during the 1966 flood. As part of the reconstruction effort, three rustic wooden bridges that once crossed Bright Angel Creek were replaced with aluminum structures with concrete foundations. A fourth bridge, known today as the Bridge in the Redwall, was also constructed in this effort. The North Kaibab Trail was closed for reconstruction in 1966. Between 1966 and 1971, the trail was widened, the creek was re-vegetated, and new masonry walls were constructed to retain the new trail and pipeline along the cliffs. Portions of the trail above Roaring Springs were reconstructed and opened by 1969, but the lower portions of the trail did not re-open until the summer of 1971 (Avery 1969; Sharrow 1985; Houk 1981).
1967	AD			Built	In association with the construction of the Trans-canyon Water System, a second pumphouse was built in 1967, west of and adjacent to the earlier upper Santa Fe Pumphouse (#55389) and reservoir at Indian Garden (JMA 2005, II.107).

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1969	AD	1970	AD	Demolished/ Built	The earlier CCC-era mule barn was razed and a new barn and corral were constructed at Indian Garden; both the barn and corral were built in the same location as the existing structures. The new corral was enclosed by a wood post and wire fence. In association with the construction project, retaining walls along Garden Creek were replaced with gabion walls. The purpose of the walls was to control floodwaters from a western drainage leading into the creek (JMA 2005, II.107).
1970	AD			Built	The newly-constructed Trans-canyon Water System and associated Silver Bridge were dedicated on July 24, 1970 (Sharrow 1985; Houk 1981).
1970	AD	1989	AD	Established/ Removed	A campground at Roaring Springs is depicted on an undated trail guide map of the "Bright Angel and Kaibab Trails." Other features shown on the map suggest that the guide was published in the 1970s or 1980s. It is unclear when this campground, which no longer exists, was constructed or removed (Trail guide n.d.).
1971	AD			Destroyed	The North Kaibab Trail closed again in late July, following a flash flood that also destroyed a 60-foot section of the recently completed Trans-canyon water pipeline (Sutphen 1992).
1972	AD			Removed	The Phantom Ranch swimming pool was filled in by the Fred Harvey Company due to maintenance and health concerns. Many items were reportedly buried in the pool including hand-carved doors from the Recreation Hall, a piano, oil-burning stoves once used to heat the cabins, grills, and items from the old blacksmith shop (Anderson et al. 2010, 6).
1973	AD	2003	AD	Maintained	Renowned landscape artist Bruce Aiken, his wife, Mary, and their three children moved to the Roaring Springs Residence in 1973. Bruce served as the pumphouse operator at Roaring Springs until his retirement in 2003 (McGarry 2007).

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1974	AD			Altered	The showers in the three remaining guest cabins (#55568, 55569, and 55570) at Phantom Ranch were converted into toilets (Cleeland 1986, 50).
1974	AD			Built	A laundry room was added to the west side of the Phantom Ranch Dining Hall (#55575) (Anderson et al. 2010, 6; Cleeland 1986, 50).
1976	AD	1978	AD	Maintained	At Phantom Ranch, use of the Bright Angel Campground during the peak season of June and August increased from 1,974 campers to 2,199 campers per month. Similarly, the number of people staying at the Fred Harvey cabins increased from 1,655 to 1,781 guests per month. During the off-season of December through February average overnight visitation increased from 962 to 1,174 campers per month and from 482 to 821 cabin guests per month (Fleming et al. 1980, 2).
1976	AD	1979	AD	Altered	A projecting room was added to the Trail Crew Bunkhouse at Phantom Ranch (Cleeland 1986).
1977	AD			Built	The Youth Conservation Corps added new restrooms to the Rock House (#55437) and Packer's Cabin (now the River Ranger Station, #55420) at the Bright Angel Creek delta (Anderson et al. 2010, 6; Cleeland 1986, 57).
1977	AD			Built	A board and batten bathroom addition was added to the west side of the USGS Operator's Cabin (now the STP Operator's Cabin) at the Bright Angel Creek delta (Cleeland, 1986, 53).
1977	AD			Land Transfer	The last USGS-owned structure in the vicinity of Phantom Ranch was donated to the NPS (currently the Phantom Ranch Ranger Station) (Anderson et al. 2010, 7).
1977	AD			Demolished/ Built	The original tent frame units at Phantom Ranch were demolished and replaced with prefabricated metal hiker dorms. Each dorm had five bunk beds, a bathroom and shower, electricity, and heating and cooling systems. The adjacent washhouse (now known as the Employee Cabin, #665450) was also

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					remodeled to serve as employee's quarters, and the Recreation Hall (#55561) was converted into an employee bunkhouse. Renovations to the former Recreation Hall included enclosing the north and south portions of the bedroom and moving the bathrooms from the east end of the building to the building's center. The Delco Light Plant was enclosed and converted into a Mule Guide's Cabin (#55556) (Anderson et al. 2010, 6; Cleeland 1986, 50-51).
1978	AD			Destroyed	Heavy rains on top of dense snowpack caused considerable runoff and flooding throughout the canyon, resulting in closure of all canyon trails on March 2, 1978. An NPS news release stated "wet conditions have caused over 60 rock and mud slides on the South and North Kaibab Trails and the Bright Angel Trail" (Sutphen 1992).
1980	AD			Preserved	A DOE for the Cross Canyon Corridor Historic District was signed by the Keeper of the NRHP on February 7, 1980.
1980	AD			Planned	An Environmental Assessment (EA) was completed for the sewage treatment facilities at Phantom Ranch. The existing system was determined to be substandard and overloaded, posing a public health threat. The document evaluated the potential environmental consequences of constructing several feasible alternatives to correct the sewage treatment system (Fleming et al., 1980).
1980	AD			Planted	The sewage treatment facility and restrooms at the Bright Angel Creek delta were landscaped with cottonwood trees and other native vegetation (Fleming et al. 1980, 9).
1980	AD	1989	AD	Altered	The restroom building at the Bright Angel Creek delta was converted back to a storeroom (#55558) sometime in the 1980s (Anderson et al. 2010, 7).
1981	AD			Reconstructed/ Built	In 1981, the original sewage collection and treatment facilities at Phantom Ranch were replaced and upgraded.

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					Project activities included the construction of a new tertiary sewage treatment plant, two restrooms, and a footbridge, as well as the replacement and extension of the service connections and main trunk sewer lines. The new system allowed for a maximum capacity of approximately 12,000 gallons of sewage a day (Fleming et al. 1980, 8).
1981	AD			Planted	Native grass seed was sown in trampled areas alongside the Bright Angel Trail and adjacent to facilities. Approximately one-third of an acre was reseeded (Anderson 2001, 70).
1981	AD			Built	The 1,856-square foot treatment plant was constructed on the Bright Angel Creek delta. The restrooms were located in the Bright Angel Campground and adjacent to the new treatment facility. Both measured 460 square feet and had 8-foot-high ceilings. Both the treatment plant and restrooms were designed to "blend in as much as possible with the natural surroundings and other existing structures" in the area (Fleming et al. 1980, 9).
1981	AD			Established/Preserved	U.S. Secretary of the Interior James Watt designated the North and South Kaibab Trails, along with the Bright Angel and Colorado River Trails, as part of the National Trails System in recognition of their significance to tourism and transportation at the Grand Canyon (Sutphen 1992; Anderson et al. 2010, 4).
1982	AD			Removed/Altered	In 1982, Mountain Bell installed a microwave transmitter at Phantom Ranch which transmitted telephone calls relayed via the Trans-canyon Telephone Line (#55623) to a switching station on the South Rim. At this time, a 1.5-mile segment of the Trans-canyon Telephone Line between the River Rest House (#55443) and Phantom Ranch was removed. The original 2-inch-diameter galvanized pipe poles from the obliterated portion of the telephone line were moved to Indian Garden and Bright Angel and Cottonwood

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					Campgrounds so that campers could hang backpacks on them to deter rodents (Cleeland 1986a).
1982	AD			Rehabilitated	The Bright Angel Campground was rebuilt by the NPS due to the damaging effects of the 1966 flood and the 1981 sewer installation (Anderson et al. 2010, 8; Cleeland 1986b, 60).
1982	AD			Established	A report on day use of the South Kaibab and other trails was produced to collect data on persons who did not receive overnight passes within the park. The study used electric eye counters to count hikers and mules that passed. Unfortunately, it was assumed for the study that hikers descended and ascended on the same trail, which is often not the case with the South Kaibab. Many who descended this trail were known to "loop" over to the Bright Angel Trail, and ascend there. The number of mules and permitted hikers that passed was subtracted to determine the total number of day hikers for each trail. It was determined that approximately 37,523 day use hikers used the South Kaibab Trail, although this number is likely somewhat high due to unmeasured "looping" (Underhill 1983).
1984	AD			Built	The NPS constructed a small amphitheater of benches surrounded by rock piers, to be used for interpretive talks at Phantom Ranch (Cleeland 1986, 60).
1985	AD			Expanded	By 1985, the addition to the Phantom Ranch Dining Hall (#55575) was being used as the dining room and the original dining room became the kitchen. The hall had two entrances—one for guests and another for employees. The employee entrance was still being used for that purpose, though the foyer at that entrance had been enclosed. The location of the original guest entrance was being used for a registration window (Cleeland 1986, 45).

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1985	AD			Planned	A plan was developed to improve buildings, campsites, and utilities at Cottonwood Campground. Proposed improvements included the construction of a composting toilet east of the North Kaibab Trail; removal of the old generator building, privy, and small storage building north of the Cottonwood Ranger Station (#9441); replacement of the Ranger Station roof; lowering the grade around the Ranger Station; construction of three ramadas; installation of warning notices and evacuation procedures; enlarging, combining, and closing sites; rerouting a small wash; site leveling; pack pole installation and removal; hazardous tree removal; planting and pruning; trail construction and rehabilitation; installation of a drinking water faucet at the new comfort station; and installation of a buried power line from Roaring Springs to the Ranger Station (Sharrow 1985).
1985	AD			Built	The main erosion channel of Garden Creek was stabilized with rip-rap in the vicinity of Indian Garden to control flooding. In association with the water system improvements, water service was terminated to Indian Garden facilities (JMA 2005, 107).
1985	AD			Built	Four Clivus Multrum brand composting toilets were constructed at Indian Garden—one north of and adjacent to the existing comfort station, one on a slope east of the Indian Garden trail shelter, and two in the area of the 100-year floodplain proposed for the new campground (Leonard et al. 2010, 45).
1985	AD			Expanded	The old 6-inch-diameter water supply pipe at Indian Garden, dating to 1932, was replaced with a new 8-inch-diameter steel pipe (Leonard et al. 2010, 45).
1985	AD	1986	AD	Altered	As part of an acoustical treatment to isolate noise, the North Pumphouse at Indian Garden received a new stone veneer and the windows of the South Pumphouse were covered with board siding (Leonard et al. 2010, 45).

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1986	AD			Built	By 1986, the Fred Harvey Company had completed a bathroom addition on the west side of the mule guide's quarters (originally the Delco Light Plant, #55556) at Phantom Ranch (Cleeland 1986, 51).
1986	AD			Conserved	The Trans-canyon Telephone Line (#55623) is listed in the NRHP on May 13, 1986 (Leonard et al. 2010, 45).
1986	AD			Demolished/ Built	The west addition to the Phantom Ranch Dining Hall (#55575) was removed by the Fred Harvey Company and a new laundry building was constructed to the west of the dining hall (Anderson et al. 2010, 6; Cleeland 1986, 50).
1986	AD	1988	AD	Built	A second bunkhouse was constructed west of and adjacent to the 1943 SFRR Pump Caretaker's Residence (#9440) at Indian Garden (Leonard et al. 2010, 46).
1987	AD			Removed	Six hazardous Fremont cottonwood trees were removed from the Cameron-era grove at Indian Garden. The remains of the trees were left or burned on-site (Anderson 2001, 71).
1988	AD			Built	A new storage/laundry/first aid building, ranger station, and Pumphouse Operator's Residence were constructed as part of the new administration complex at Indian Garden. The complex was located upstream of Garden Creek, out of the 100-year floodplain. That same year, a bunkhouse was moved from its former location west of the Pump Caretaker's Residence to the new administration and new stone veneer was added to the building. A new mule barn was also constructed west of the pumphouses (Leonard et al. 2010, 46).
1988	AD			Built	A sand filtration system and sludge-drying bed, helipad, and stairs and pathways were constructed in association with the Indian Garden administration complex. The filtration system was located to the north of the complex, and the helipad was located to the south (Leonard et al. 2010, 46).

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
1988	AD			Maintained	The NPS presented guidelines for future use of the South Kaibab Trail in its <i>Backcountry Management Plan</i> , dated September 1988. The trail was designated as a "Type A, Level I backcountry trail," which was to be "consistently maintained and improved at the highest level" to compensate for unusually high traffic (Sutphen 1991).
1988	AD			Established	The NPS designated the North and South Kaibab Trails, along with the Bright Angel and River Trails as the major transportation arteries of the canyon's Corridor Use Area. The Corridor Use Area was defined as an area characterized by permanent structures and heavily maintained trails for human and livestock use. The North Kaibab was considered a Type A, Level I corridor trail, and continues to require more maintenance than any other trail in the park (Sutphen 1992; Anderson et al. 2010, 4).
1989	AD			Demolished/ Stabilized	Three 20th century buildings—the 1970 mule barn, the 1965 bunkhouse, and the 1961 comfort station—were razed at Indian Garden. Additionally, the old NPS ranger station was stabilized for use as a caretaker's residence (Leonard et al. 2010, 46).
1989	AD			Established/ Removed	On the recommendations of a floodplain study and Development Concept Plan, the Indian Garden campground was moved upstream and out of the 100-year floodplain due to persistent and damaging flooding. A total of 16 new campsites complete with shade structures, picnic tables, and backpack racks were installed. Each site was connected by short paths leading to a central north-south path through the area. All signage associated with the old campground was removed and four new signs identifying the area's new use as a "Day Use Area" were installed. Additionally, all drinking fountains and the old pump station and septic tank located in the old campground area were removed (Leonard et al. 2010, 47).

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
1989	AD			Built	A new information center and rest area east of and adjacent to the mule barn were constructed at Indian Garden. The rest area included an information kiosk, a drinking fountain, and nine benches (Leonard et al. 2010, 47).
1989	AD	1990	AD	Planted	New plantings and irrigation systems were placed in and around the administration complex, campground, and mule barn at Indian Garden. Plantings included netleaf hackberry, cat claw acacia, datil yucca, bear grass, prickly pear cactus, Colorado four-o'clock, and velvet ash. Grass seed was also planted in the northeast corner of the campground (Leonard et al. 2010, 47).
1990	AD	1999		Abandoned	The side trail to Bright Angel Campground from the mule corral and Silver Bridge was closed due to an unstable cliff face under which it passes. Travelers likely accessed the mouth of Bright Angel Creek on a variety of trails in this area prior to formal NPS trail construction in the 1920s. From 1933 to 1936, CCC enrollees likely used this or another trail to travel from Camp NP-3-A to their tramway across the river as they worked on the Colorado River Trail. In the 1960s, the trail was a major access route for those travelling from the Silver Bridge to Phantom Ranch (Anderson et al. 2010, 4).
1991	AD	1992		Planned	A categorical exclusion (CE) was completed in November for rework of a 118-foot section of the North Kaibab Trail below the first switchback from the North Rim. The project proposed to widen the trail from 4 feet to 8 feet in width to allow mules a location to "cinch up" while riding instructions were provided. The trail sides were proposed to be re-sloped to make up for the additional width, including a 2-feet-high stone retaining wall if necessary. Additionally, a wash area used for the stock holding near the Supai Tunnel was proposed to be rehabilitated by removing boulders and fill to make a

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
					level, usable area and a hitching pipe was proposed to replace the existing hitching cable. The CE was approved in December and all work was approved in January 1992 (Blackwell et al. 1991).
1992	AD			Destroyed/ Rehabilitated	Large amounts of precipitation received over the previous weeks caused a large rock slide below the North Rim on January 16, 1992 which destroyed a 60-foot section of the Trans-canyon pipeline near Roaring Springs. Additionally, all mule operations were suspended along the South Kaibab Trail, which was also in poor condition due to the large amount of rainfall, and no walk-in reservations for Bright Angel Campground were allowed until the pipeline repairs at Roaring Springs were completed. Hikers were advised that all water sources would need to be purified (Oltrogge 1993).
1992	AD			Destroyed/ Reconstructed	Due to a major rock slide, the North Kaibab Trail was closed between the Supai Tunnel and Roaring Springs from February 13 to June 15, 1992. NPS trail crews reconstructed more than 1,500 linear feet of trail, and approximately 8,000 square feet of retaining wall that were lost in the slide. Five switchbacks were also rebuilt in extremely steep, unstable areas, along with 25 drainage devices. Several hundred tons of debris was cleared from the trail, and approximately 1,600 pounds of fill material was hauled in to reconstruct the damaged trail (Oltrogge 1992; NPS News Release 1992).
1992	AD			Demolished/ Altered	A 0.5-mile-segment of the South Kaibab Trail was closed on April 14, 1992, after GRCA Safety Manager Luis Hoddenback identified a large, unstable rock in the cliff face of the upper Kaibab Limestone as a potential safety hazard to hikers. The area was stabilized on April 18, and removal of the rock began two days later. Damages to the trail as a result of the rock's removal required the reconstruction of approximately 1,287 linear feet of trail, 3,861 square feet of wall, and repairs to the eight trail

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
					switchbacks. In an effort to re-open the trail as soon as possible, a trail crew of eight employees worked over 1,500 hours in a period of 24 days to complete the stabilization and reconstruction work. On May 11, NPS announced that the South Kaibab trail would reopen the following day.
1993	AD			Destroyed/Conserved	After a flash flood in 1993, the footbridge at Indian Garden was razed. The bridge's concrete abutments on both sides of Garden Creek were left <i>in situ</i> (Leonard et al. 2010, 47).
1993	AD			Planned	Superintendent Robert S. Chandler announced the public availability of a Draft EA for the Cottonwood Campground Redevelopment and Flood Protection Plan along with a draft Floodplain Statement of Findings. The documents were prepared to address plans to return Cottonwood Campground to its use level prior to floods in the late summer of 1992, by establishing new campsites out of the floodplain and providing flood control structures (Traver 1993).
1997	AD			Removed	The NPS initiated plans to eradicate and control the spread of the Himalaya Blackberry at Indian Garden. Plants were cut at their base and then sprayed with a chemical herbicide (Leonard et al. 2010, 48).
1997	AD			Preserved	Individual draft National Register nominations for the Bright Angel, South Kaibab, and North Kaibab Trails and a Multiple Property Documentation Form for roads and trails in the Grand Canyon were submitted to the SHPO on August 28, 1997. All of the properties were determined eligible for listing in the NRHP; however, the form and nominations were not submitted to the Keeper.
1997	AD			Conserved	The Bright Angel Trail was determined eligible for inclusion in the National Register of Historic Places (Reba Grandrud to Bruce Kilgore, August 1997, GRCA Trail Archives file).

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
1998	AD			Mapped	The Bright Angel Trail was mapped using a Global Positioning System receiver. Plans for this survey indicated that the collected information would be used to identify agents and causes of deterioration along the trail (GRCA Current Status: Trails, 1998, GRCA Trail Archives file).
2001	AD			Stabilized	A letter from Superintendent Joseph F. Alston to Historic Preservation Officer, James Garrison on April 9, 2001 revealed plans to stabilize and repair the Bright Angel Trail. Plans include an inventory of the trail and an assessment of current conditions. In addition, another report in November 2001 noted that "maintenance of existing structural features (retaining walls, check dams)" was the primary focus of the project (Alston 2001; GRCA Trails Archive file).
2005	AD			Preserved	A Cultural Landscape Report (CLR) for Indian Gardens was prepared by JMA (Leonard et al. 2010, 48).
2006	AD			Preserved	The CLR for Indian Garden was adapted to create an incomplete Cultural Landscape Inventory (CLI) of the Bright Angel Trail Corridor. The draft CLI focuses only on Indian Garden and excludes the Bright Angel Trail alignment (Leonard et al. 2010, 48).
2009	AD	2010	AD	Preserved	The Bright Angel Trail Corridor CLI was revised by LSD to include the Bright Angel Trail sections omitted from the 2006 draft (Leonard et al. 2010).
2010	AD	2011	AD	Maintained	Presently, the Cross Canyon Corridor trails and associated Landscape Areas remain in heavy use by recreationists. All of the trails remain open year-round, although utilities and services on the North Kaibab are not available during winter months. The trails are heavily maintained, and the North Kaibab Trail remains as the most heavily maintained trail in the GRCA.
2010	AD	2011	AD	Maintained	Presently, Phantom Ranch looks much like it did in the 1930s. Behind the scenes, however, sophisticated technology supports the current needs of the ranch. Buried cable provides

Start Year of Major Event	Start Era AD/BC of Major Event	End Year of Major Event	End Era AD/BC of Major Event	Major Event	Major Event Description
					electricity to the ranch, and a microwave dish provides telephone service. The sewage treatment plant near the mouth of Bright Angel Creek still fits the rustic style of the ranch, but includes a series of computer monitors that link it to the park-wide computer network. Mule pack strings still deliver supplies to the ranch, and haul out over two tons of garbage each week. The ranch has also implemented an elaborate composting system, which handles nearly 100 pounds of garbage a day (Thybony 2001).

Physical History

10,000 BC–1879 — Native American Occupation and Early Euro-American Exploration

Prehistoric and historic populations of Native Americans including the Cohonina, Cerbat, Ancestral Puebloan, Havasupai, Hualapai, Paiute, Hopi, Zuni, Navajo, and Yavapai Apache utilized all areas of the Grand Canyon, including the inner canyon, for thousands of years before the first Euro-American visited the area. While it is widely accepted that Native Americans traversed the general route along Bright Angel Fault as early as 10,000 BC, the only evidence of human occupation at the Grand Canyon during the Paleo-Indian period are two projectile points. One of the points is attributed to the Clovis culture, and the second point dates to the Folsom Tradition. The Clovis point was found on the South Rim in the Desert View area and the Folsom point was discovered in the extreme northeast section of the park in the inner area of Nankoweep Canyon. Mallery's Grotto, located beneath the South Rim and to the west of the Kolb Brothers studio near the Bright Angel trailhead contains pictographs dating to the Archaic Period, but also has later Cohonina and Havasupai elements. Other archeological sites are located along the route to Indian Garden. Early Euro-American explorers of the area also noted decayed ladders of Douglas fir (*Pseudotsuga menziesii*) beneath the Redwall formation and at today's second tunnel. While this evidence does not provide a clear indication of the route used by the majority of prehistoric peoples, it does establish that the current Bright Angel Trail corridor represents one of the more formal trail routes used by the earliest inhabitants of the Grand Canyon. Additionally, Indian Garden contains at least 15 prehistoric sites that indicate seasonal habitation in the vicinity of the route (Anderson 2002, 3; Wilson 1999).

Similar to the Bright Angel Trail, archeological evidence has also been found in the vicinity of the North Kaibab Trail, which suggests prehistoric use of this trail route. Zuni origin and migration narratives, in addition, suggest that Ribbon Falls (along the North Kaibab Trail) is the tribe's ultimate point of origin (JMA 2005). Recent surveys conducted along the trail have resulted in the recordation of 38 newly-recorded and previously recorded archeological sites. The Bright Angel site also provides clear evidence of Ancestral Puebloan presence in the central canyon corridor. First described by John Wesley Powell in 1869 as "two or three old houses, originally of stone lain in mortar," the site consists of five connected rooms with a detached kiva and one additional room that date between AD 1050 or 1160 and 1140 (Schwartz 1979). These ruins can be seen about 200 yards (180 m) west of the Kaibab Suspension Bridge (Black Bridge) alongside the North Kaibab Trail. Additionally, numerous archeological sites in the vicinity of Cottonwood Campground and along Bright Angel Creek indicate seasonal habitation of these areas by prehistoric peoples (Grand Canyon Association 2005, 23).

The South Kaibab Trail is one of the few trails at GRCA that did not originate as a prehistoric route. However, artifacts discovered along the South Kaibab Trail between the Tip-off and the Colorado River suggest that this portion of the trail was used, at least intermittently, by prehistoric inhabitants of the Grand Canyon.

In 1540, the Grand Canyon was documented by Spanish explorer and Friar Alvar Nuñez (Whiting 1909, 325). That same year, under the direction of conquistador Vasquez de Coronado, Captain Garcia Lopez de Cardenas led a party of Spanish soldiers with Hopi guides to the canyon in search of the "seven rich cities of Cibola" (Verkamp 1940, 1). In 1550, however, the Spanish determined that the region did not contain significant mineral resources to warrant further exploration of the Grand Canyon and their mission was subsequently abandoned (Verkamp 1940, 1). Despite continued visitation and exploration of the canyon by prospectors and adventurers, few ethnographic accounts describing interactions between the canyon's native inhabitants and Euro-Americans exist from this era (Hughes 1967, 21).

In 1775, nearly 200 years after the Spanish first explored the canyon in search of mineral wealth, two Franciscan missionaries, Silvestre Velez and Francisco Atarcusio Dominguez surveyed the region in search of an overland route to connect Spanish settlements in Santa Fe, New Mexico

and California (Sutphen 1992a). The following year, a third Franciscan missionary, Father Francisco Tomás Garces traveled along the South Rim and visited the Havasupai living in the canyon and the Hopi Mesas to the east. Garces called the canyon Puerto de Bucareli, or Bucareli Pass, after the viceroy of New Spain, and was the first European to refer to the river as the Rio Colorado (Sutphen 1992a; Hughes 1967, 32). Archeological evidence indicates that during this same period, the Indian Garden area was occupied seasonally by the Havasupai. The Havasupai made use of numerous streams to cultivate maize, squash, and beans, and possibly newly-introduced fruits such as peaches, apricots, figs, and melons. While explorers came and went through the Grand Canyon, the Havasupai called Indian Garden home, at least during certain months of the year, and found a means to cultivate the rich agricultural lands available within the canyon (Whitney 1982, 41).

During the late 18th and 19th centuries, the canyon was used intermittently by trappers who exploited the Colorado River and its tributaries for beaver until the southwest became a U.S. territory in 1848. In 1849, Mormon explorers from the Great Salt Lake region arrived in the Grand Canyon area in search of land to potentially include in their newly-established state of Deseret. By 1862, Mormon explorer Jacob Hamlin had explored much of the Kaibab Plateau and Tuweep area, and by 1872, the small communities of Cedar City and Kanab were established within a “two days ride” of the North Rim (Sutphen 1992a).

By the mid-19th century, Euro-Americans had made significant advances to explore the canyon in its entirety. In 1857, the Federal government commissioned Lieutenant Joseph Ives to explore the Colorado River and determine its navigability for steamboats (Sutphen 1992a). Although Ives was impressed with the canyon, he reported back to the Federal government after his 350-mile journey up the Colorado River from Fort Yuma in California to the mouth of Black Canyon near the present-day site of Hoover Dam that the canyon was “altogether valueless” and “a profitless locality” (Sutphen 1992a). In 1869, U.S. Army Major John Wesley Powell and his team made their famous journey through the canyon and brought great attention to the area through their systematic exploration. Because of his expedition, the name “Grand Canyon” became the most common name to refer to the canyon. Powell also named the mouth of the creek along the river “Bright Angel Creek” for its clear waters (Whiting 1909, 324; Whitney 1982, 45).

1880–1918 — Early Claims, Continued Euro-American Exploration, and Private Development within the Cross Canyon Corridor

By the 1880s, prospectors were searching the inner Grand Canyon and areas along Bright Angel Fault for valuable minerals (Anderson 1998, 57). The prospectors made use of established Native American trails and eventually improved the trails for continued exploration, and mining, transportation, and tourism purposes (Sutphen 1992a). Among these men were William Ashurst and John Marshall, who in 1890 claimed and documented the trail along the Bright Angel Fault that led from the South Rim to Indian Garden. Near the end of December 1890, Pete Berry, Niles Cameron, Robert A. Ferguson, Curtis H. McClure, and Millard G. Love, who had interests in mining claims in the vicinity of Indian Garden, camped on the South Rim and began construction on what was then referred to as “the old Havasupai Trail.” In order to improve the route, the men cleared, widened, stabilized, and rerouted the trail to accommodate pack animals that would carry mining and camp supplies and equipment into the canyon. All of this was accomplished with the intention of making mining in the canyon more accessible, and therefore, more profitable (Anderson 1998, 73).

After realizing the trail's importance to the accessibility of mining claims in the canyon, Pete Berry and Niles Cameron purchased Ashurst's trail claim and recorded it as the Bright Angel Trail with Yavapai County in 1890. Within the next year, Berry filed a second trail claim that continued the Bright Angel Trail route to the mouth of Pipe Creek on the Colorado River. Despite having obtained this claim, Berry made no indication of extending the trail beyond Indian Gardens, demonstrating the team's focus on mining prospects rather than creating a transportation route. Also during 1890, numerous prospecting explorations took place along the trail and in Indian

Garden; and numerous excavations occurred in an attempt to locate minerals as well as prove that the mining claims were active (Anderson 2002, 4).

By 1891, however, Berry, Cameron, and Niles' brother, Ralph, recognized the trail's potential for tourism. That year, the men re-recorded the route with Yavapai County as the "Bright Angel Toll Road" and began to operate the trail for tourists and travelers, charging a use fee of one dollar a person. While reports state the trail was in poor condition during this early period of tourism at the canyon, Sanford Rowe, who Ralph Cameron allowed to lead tourists down the trail in 1892, indicated that the trail was passable. Berry and Ralph Cameron also testified that trail improvements continued during this period to ensure safe passage for those that traveled down it either on foot or by mule (Anderson 1998, 86).

As knowledge of the Grand Canyon increased, so too did its popularity with visitors looking for a route into the canyon. Holding claims to both the trail and its trailhead, Ralph Cameron began construction of a lodge at the Bright Angel trailhead on the South Rim in 1896. In 1898, Cameron and Berry made improvements to the trailhead and the first several hundred feet of the Bright Angel Trail, which included realigning the route in several places to decrease its gradient and the removal of rubble along the trail for easier passage. Also during this same year, Berry and Niles Cameron began expanding the toll road further north from Indian Garden to the Colorado River. Construction of this segment of the trail was completed by Curtis McClure, John R. Holford, D.W. Barter and Niles Cameron for the purpose of gaining further access to mining claims, however, rather than expanding the tourist route. Cameron continued to prospect for minerals in the vicinity of the trail during the entire length of his hold on the land; however, he eventually recognized that there was more economic value in opening the property to tourism than there was in mineral development of the canyon. Many of his mining claims reflected this change in his thinking, as additional routes were developed for those looking to experience canyon views rather than for strict access to its mineral deposits.

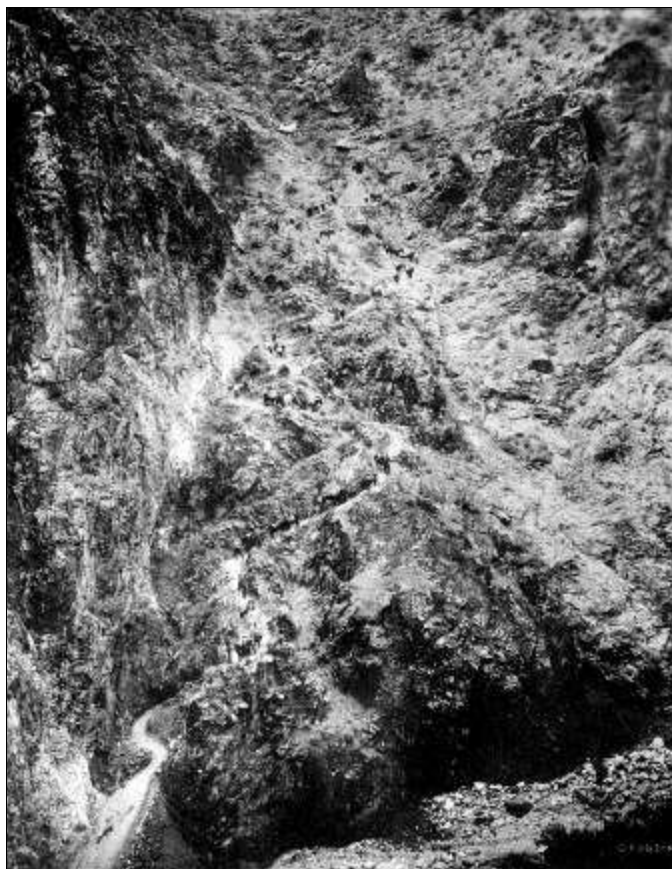
The "Cameron Trail," as it was commonly referred to in the late 19th and early 20th centuries, quickly became the most popular trail into the inner canyon. With the arrival of the Grand Canyon Railway to the South Rim in 1901, the trail's popularity as a tourist route into the canyon greatly increased, and most significant attempts at mining the canyon were abandoned to concentrate on this new enterprise. The original franchise to operate the trail expired in this year, and Pete Berry was granted a five-year extension from the recently formed Coconino County. However, once Cameron discovered that the SFRR planned to construct a new spur line from Williams, Arizona to Grand Canyon Village at the South Rim, he secured total rights to the Bright Angel Trail. Cameron bought out Pete Berry's share and that of the other partners and immediately invested in extensive reconstruction of the trail to improve its accessibility for tourists. In 1903, he developed tourist facilities along the route, including Cameron's Hotel and Camps at the Bright Angel trailhead and Cameron's Indian Garden Camp at Indian Garden.

As a result of Cameron's improvements, the South Rim and the Bright Angel Trail quickly became the most popular destination from which to experience the Grand Canyon. To cater to the growing number of visitors, photographers Ellsworth and Emery Kolb established a shop, known today as Kolb Studio, on the South Rim near the Bright Angel trailhead in 1904. Anderson (1998) reports:

The Kolbs [sic] opened their studio in a floorless tent beside Cameron's hotel, used a shallow mine shaft as a darkroom, and developed prints with murky water obtained from cattle ponds as far away as Rain Tank. In 1904, they upgraded to a small frame studio on Cameron's mining claim at the Bright Angel trailhead which, with additions in 1915 and 1925, still stands as one of the oldest buildings within Grand Canyon National Park (Anderson 1998, 95).

The Kolb brothers photographed tourists on their way down the trail, processed the prints, and had prints available for purchase in the shop upon the caravan's return. In 1906, the brothers moved their studio to a two-story stone and frame building which Emery constructed at Indian

Garden adjacent to Garden Creek, “but for years thereafter Emery still had to jog the 9-mile round trip from rim side studio to inner-canyon cabin...as many as three times each day for the luxury of clean water” (Anderson 1998, 95). The brothers produced thousands of photographs during their years at the Grand Canyon, many of which have since become iconic images. Their historic photographs of mule caravans traversing the steepest grades of the Bright Angel Trail are among the most well-known and widely-recognized images of the Grand Canyon dating to the historic period (Photograph 1) (Anderson 1998, 95).



Photograph 1. Kolb brothers photograph showing a mule train descending the steep switchbacks at Jacob's Ladder, date unknown (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

In order to further secure their interests at the Grand Canyon, Cameron and his brother Niles filed numerous mining and water claims at strategic locations along the trail. In addition, Cameron secured William Ashurst's claims to Indian Garden and placed numerous claims along the trailhead, including the Copper King (1901), and Cape Horn and Golden Eagle claims (1902) (Anderson 1998, 90; Billingsley 1997, 65). By 1904, Cameron filed the Willow claim at the base of the Devil's Corkscrew, and the Wizard claim and Willow Mill site near the mouth of Pipe Creek. All of these claims were later rejected by the Federal government as they could find no evidence that they were ever developed for mining. However, Cameron, well versed in mining law, made modest claim improvements which aided him in associating the claim locations with the larger trail well into the early 1920s. This practice of filing mining claims to acquire land for the tourist trade was not unique to Cameron, as many entrepreneurs used this method to ensure rights to lands. Cameron's claims, though ultimately temporary, would later make it difficult for others, including the NPS, to gain control of the property.

In 1902, legal battles over use of the Bright Angel Trail began with a challenge by the SFRR over Cameron's claims to the railroad station site and his ownership of the Bright Angel Trail. Martin Buggeln and the SFRR developed the Bright Angel Hotel and adjacent tents (known as the Bright Angel Camp) on the South Rim, which infringed on Cameron's Cape Horn and Golden Eagle claims. The courts allowed the railway's 20-acre station to remain on the rim, though they allowed Cameron to keep the remainder of the property. Thus, the South Rim became a battleground for competing tourist enterprises.

While Cameron battled with the SFRR for control over land on the South Rim, sections of the Grand Canyon's North Rim were being surveyed, as part of a larger effort to map the Grand Canyon, by USGS cartographer Francois E. Matthes. In 1902, Matthes and his party of cartographers and geologists were sent to the Grand Canyon to plot sections of the North Rim. The group had started their work on the South Rim, crossing the Colorado River by ferry via the South and North Bass Trails. The South Bass Trail began approximately 16 miles northwest of today's Grand Canyon Village, near Signal Hill on the South Rim. The trail extended generally northward down to the Colorado River, just west of the present day Bass Rapids. North Bass Trail began at this point on the north side of the river and extended generally northward to Swamp Point on the North Rim, approximately 19 miles northwest of the present day Grand Canyon Lodge. Although this river crossing involved a 25 mile, 6 day trek along the Bass Trails, it was the nearest crossing point at that time. When it came time to return to the South Rim, the team thought it would be easier to try and descend along the Bright Angel Fault. Despite the difficulty of the route, the party succeeded in clearing a path down to the river, which they crossed in a wooden boat which belonged to an unknown prospector. Then they ascended to the South Rim via the Bright Angel Trail. The following year, Matthes packed in a steel boat by mule for crossing the Colorado River and began using the newly-blazed trail as his regular access route into the inner canyon (Thybonny 2001, 19). Matthes' later described the route in a 1927 issue of *Grand Canyon Nature Notes* as,

"so steep as it in certain places that the animals fairly slid down on their haunches. So narrow between the rocks was it at one point, that the larger packs could not pass through and had to be unloaded" (Matthes 1927).

He goes on to state that at the bottom of Bright Angel Canyon, the crew traversed the "bouldery" and knee-deep Bright Angel Creek "no less than 94 times" before reaching the "boxed-in lower part of the canyon" (presumably the area known today as "The Box") (Matthes 1927). He also noted that the trail was "as rough as ever" when his team used it to reach the inner canyon the following year (Matthes 1927). Additional detailed descriptions of Matthes' early path through Bright Angel Canyon have not been found.

The conflict on the South Rim escalated in 1903 when Cameron initiated a one dollar toll per animal to descend the trail. Owner of the Bright Angel Hotel, Martin Buggeln had long charged three dollars a day per horse and five dollars a day per guide, sharing his earnings with the railroad and not paying anything for the use of the Bright Angel Trail. However, when Cameron discovered he had the legal right to charge a toll for use of the trail, he wasted no time in erecting a toll gate, thereby restricting Buggeln's, and subsequently the SFRR's, use of the trail (Photograph 2). The railroad in return filed the *Territory of Arizona vs. Ralph H. Cameron*, the first of many lawsuits in the over 20-year debate over public vs. private use of lands at the canyon (Anderson 1998, 90).



Photograph 2. Kolb Brothers photograph showing Cameron's toll gate at the Bright Angel trailhead, ca. 1904 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

In 1906, the lawsuit found that Pete Berry did not have the right to transfer the toll franchise to Cameron, though it was determined that Berry did have the right to collect tolls and that he had simply allowed his friend to work the trail. When the lawsuit found that both Cameron and Berry maintained the legal rights to the trail and to its toll, the partners came back at the railroad with a lawsuit for damages incurred from the 7-month injunction and tried to collect the \$5,000 bond Buggeln and the SFRR had posted (Anderson 1998, 90). At this point, the railroad tried to buy out Cameron; however, Cameron refused to talk to the railroad regarding a sale. A number of lawsuits ensued between the two parties, mostly regarding the payment of taxes and land claims. Cameron lost a bit of control over his claims in 1906, when the Berry franchise expired and Coconino County would not allow Cameron to renew it in his name. The trail was awarded to Lannes L. Farrall, the manager of the Cameron Hotel & Camps, and one of Cameron's closest friends. Cameron continued to maintain his mining claims along the trail (Anderson 2002, 17).

Recognizing the Cameron-Farrall partnership, the SFRR filed a number of lawsuits to gain control of the trail. They first requested permission from the Bureau of Forestry to operate and control the trail, attempting to remove the trail from the county's jurisdiction. When the Bureau refused to issue the permit, the railroad filed a suit against the county, claiming it had no right to operate a toll road. Cameron persuaded the Arizona legislature to pass the "Cameron Bill," confirming the county maintained the right to operate a toll road and returned the franchise to Cameron's name. Throughout the ordeal, Cameron received continued support by county residents, angered by

what they perceived as governmental interference and big business' attempts to dictate law (Anderson 1998, 91).

As the legal battles at the South Rim waged on, tourist enterprises at the North Rim and within the inner canyon were being facilitated by the efforts of Utah entrepreneur, David Rust, who is considered today to be the North Rim's first concessioner. In 1903, Rust's father-in-law E. D. Woolley formed the Grand Canyon Transportation Company and allotted \$5,000 to Rust to make improvements to Matthes' northern trail route, thus making rim-to-rim trips at the canyon possible for tourists (Cleeland 1986a, 39). That year, Rust blazed a new trail suitable for the passage of livestock on the south side of the Colorado River to the Tip-off and improved Matthes' early trail up Bright Angel Canyon to the North Rim. The trail became known as Rust's Trail, but was also considered a northern extension of the Bright Angel Trail as its route followed Bright Angel Fault (Anderson 2010b, 3). Although Rust kept a journal describing his efforts, his writings do not provide details regarding the trail's early alignment or its features.

In 1907, Rust and the Grand Canyon Transportation Company installed a cable system at the mouth of Bright Angel Creek to link his trail segments and transport mules and patrons across the Colorado River. The cable system consisted of a 450-foot-long single strand cable that was suspended 60 feet above the river and held a single cage large enough for one mule or several passengers (Photograph 3). Following installation of the cable system, Rust's trail segment to the south of the Colorado River became known as the Cable Trail. To access the tramway, tourists traveled east along the Tonto Plateau from Indian Garden along the Cable Trail to the Colorado River (Cleeland 1986a, 39; Hughes 1978, 76). Although Rust's Cable Trail and tramway were utilized by hundreds of Trans-canyon tourists, hunters, and prospectors in the early 1900s, both remained hazardous and neither was well maintained. In particular, the cable system was frequently damaged by flooding and passengers often had to be ferried across the often perilous river in a canvas boat.



Photograph 3. Kolb Brothers photograph showing Rust's cable tramway across the Colorado River, ca. 1909 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

That same year, Rust also established a small outpost and tent camp, known as Rust's Camp, north of the Colorado River along the east bank of Bright Angel Creek (Photograph 4). Rust installed an irrigation system and planted cottonwood and fruit trees. He also erected several large tents, temporary buildings, and ramadas for overnight guests (Abbott 1978, 10; Cleeland 1986a, 40). His improvements to the northern trail route and amenities at Rust's Camp helped open the inner canyon to tourism, and between 1907 and 1913, the camp hosted hunting parties, early prospectors, and a "few sturdy and adventurous tourists" (Gerke 2008). The camp was abandoned for unknown reasons prior to 1913. That year, the name of the camp was changed to Roosevelt's Camp after President Theodore Roosevelt stayed in the abandoned camp during a hunting trip (Thybonny 2001).



Photograph 4. Rust's Camp, ca. 1907. Notice the semi-circular stacked rock flood wall to the rear of the cabins and debris flow from the Bright Angel Creek near the center of the photograph (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

The period between 1906 and 1913 also consisted of a number of construction and improvement projects along the Bright Angel Trail and within Indian Garden. Early Canyon residents recall that sometime between 1906 and 1908, Cameron constructed two tunnels on the upper portion of the trail, which were completed by 1913. By 1916, Cameron built a number of structures at Indian Garden including a root cellar and kitchen, a laundry tent, at least seven frame and canvas tents, and a pit toilet. Evidence shows that there was also a tool shed (though it is unknown what the structure looked like), and two frame and canvas tents for the trail maintenance supervisor which were located below Indian Garden, on an eastern slope above the Kolb Brothers studio. The platform supporting the tents was excavated out of a ridge just east of Garden Creek, and each tent had a door and two windows. The pit toilet was located west of the tent camp and

cottonwood area. At least three unidentified structures also occupied Indian Garden prior to 1916, one of which likely served as a mule shelter due to its adjacent fence enclosure. Cameron also constructed a mule hitching post and a pond, which may have served as a watering hole for the mules or as a catchment basin to water the alfalfa field. Despite these upgrades, tourists complained about the condition of the trail in 1915. Cameron continued to collect about \$20,000 in tolls that year, suggesting that 20,000 stock riders traveled the trail, as pedestrians could now travel the trail free of charge. Even as the trail began to fall into disrepair in the 1920s, it continued to be the most popular route into the canyon for tourists (Anderson 2002, 19).

After 1910, the SFRR and Fred Harvey Company, who had been battling with Cameron over land claims on the rim and the location of their hotel, eased their efforts to chase Cameron out of the Grand Canyon. The federal government subsequently focused on Cameron's fraudulent mining claims. In order to demonstrate his intention to develop his claims for production level mining, Cameron drafted plans to construct a hydroelectric plant above Pipe Creek to power mills for the intention of extracting and processing platinum. However, the government, SFRR, Fred Harvey Company, and the general public were concerned with the impact of such large scale mining operations within the canyon. Though the plans never materialized, Cameron's proposal motivated governmental officials to take action. Between 1913 and 1919, numerous lawsuits ensued until the United States Supreme Court ruled most of Cameron's claims invalid and declared Cameron and his associates trespassers on the Grand Canyon National Monument, which had been established in 1908 (Anderson 2002, 19).

By 1915, Rust's cable system was known as "Woolley's Tramway," which suggests that Woolley and the Grand Canyon Transportation Company were still actively pursuing business ventures in the inner canyon despite the abandonment of Rust's Camp prior to 1913 (Cleeland 1986a, 40). The Cable Trail continued to be utilized by cross-canyon travelers although its lack of maintenance made it treacherous to travel. In 1917, early cross-canyon traveler Joseph McAleenan termed travel along the Bright Angel Trail a "boulevard" in comparison to Rust's Trail (Anderson et al. 2010a, 4).

1919–1932 — The NPS, the Fred Harvey Company, and the Santa Fe and Union Pacific Railroads

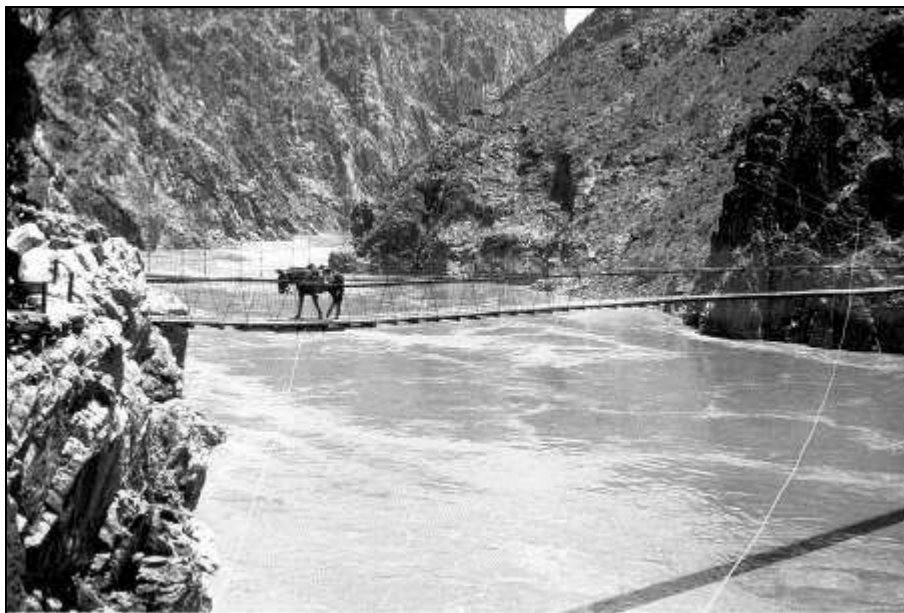
When the NPS gained administrative control of the Grand Canyon in February 1919, one of its first goals was to establish authority and consolidate control over the area, particularly at the already thriving tourist areas of Grand Canyon Village and within the central canyon corridor. At that time, the most direct access route to the inner canyon and Colorado River was via the Bright Angel Trail, which was now owned by Coconino County. County ownership of the trail was specifically protected within the 1919 Act that created Grand Canyon National Park, and transfer of the trail from Coconino County to the NPS was not an easy task. This was due primarily to the non-amicable relations between the local and federal governments (Anderson 2010, 4).

In preparation for an unfavorable outcome and to protect their interests at the canyon, NPS Engineer Miner Tillotson surveyed a new trail route to access the Colorado River at Bright Angel Creek in February 1919 (Anderson 2000, 23). The trail route, which incorporated portions of Rust's Cable Trail and spanned from Yaki Point on the South Rim to the Tip-off, was selected for both practical and aesthetic reasons. The planned location for the portions of the trail that traversed along a ridgeline afforded protection from landslides. It also offered unobstructed canyon views to hikers. The trail also provided a route exposed to sun throughout the year—which would increase functionality of the trail by ensuring a mostly dry, snow-free route. Construction of the trail was estimated to cost \$40,000, or 73 percent less than Coconino County's asking price of \$150,000 for transfer of ownership of the Bright Angel Trail to the NPS.

As negotiations for control of the Bright Angel Trail continued, between 1920 and 1921 the NPS made modest improvements to other inner canyon trails, including Rust's Cable Trail to the North Rim, which had fallen into disrepair. During this time, trail crews comprised predominantly of

Havasupai workers armed with picks and shovels reconstructed the lower portion of Rust's Cable through "The Box," eliminating 40 of the original 94 crossings of Bright Angel Creek (Anderson 2000, 22). On February 6, 1922, trail foreman Rees Griffith died as a result of injuries sustained while widening the trail. Griffith was buried along the north side of the trail near the Colorado River, and a bronze marker commemorating his death was later placed on his grave at an unknown date. By 1926, nearly six miles of the trail upstream from Bright Angel Creek had been improved (Anderson 2000, 22).

To facilitate access to their newly-improved northern trail route, in 1921, the NPS also replaced Rust's deteriorating cable system with a wooden suspension bridge (Photograph 5) (Anderson 2000, 22). Due to the bridge's remote location, all of the materials, including the 1,200 pound cables, were packed into the canyon by mule. During construction, three pack horses, carrying loads that included more than 100 pounds of dynamite, slipped over a cliff and perished on the rocks below. Upon its completion, the 420-foot-long bridge was the first within the Grand Canyon to be constructed over the Colorado River. While the bridge facilitated cross-canyon travel and made crossing the Colorado River easier, particularly for mules carrying tourists and provisions for inner canyon occupants, the structure was reportedly unstable and at times, perilous to cross. Early visitor accounts suggest that during high winds, the bridge was "tossed about so violently" that no one could cross, and several times it flipped over completely (Thybony 2001, 23). An inner canyon visitor, Frances Line, compared the early bridge to a "slender and fragile" fishing rod, and wrote that it "swayed in the wind without a person on it" (Thybony 2001, 23).

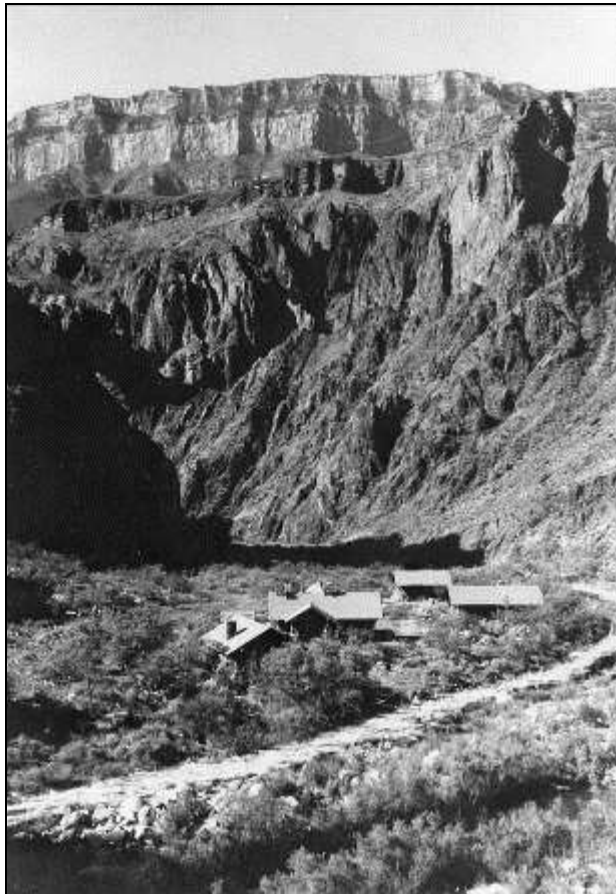


Photograph 5. Photograph of a mule crossing the first swinging suspension bridge over the Colorado River in Grand Canyon National Park, ca. 1927 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

As NPS momentum for access to the inner canyon grew and the Colorado River corridor became more accessible to tourists, the need for overnight accommodations at the bottom of the Grand Canyon became apparent. In early 1922, South Rim concessioners, the SFRR and the Fred Harvey Company announced plans for the construction of a new hotel called Roosevelt's Chalet in the former area of Rust's Camp on Bright Angel Creek (Cleeland 1986a, 42). The primary concessioner for the development, the Fred Harvey Company, had signed a contract with the NPS in 1920, to augment visitor services and accommodations at the Grand Canyon for a duration of 20 years (Anderson 2000, 14). They appointed Fred Harvey architect, Mary Elizabeth

Jane Colter to design the buildings, which included three two-person bunkhouses, a caretaker's cabin, and a lodge that included a kitchen and dining hall (Grattan 1992, 118) (Photograph 6).

Because the ranch was built to accommodate mule riders, Colter's design recalled a western ranch with a central lodge and scattered "dude" cabins (Cleeland 1986a, 42). The buildings were constructed in the Craftsman Bungalow architectural style, and their designs utilized uncut river boulders and other native stone collected from the inner canyon (Photograph 7). Other building materials, including wood for the roof supports, gables, doorways, and windows, were hauled to the site by mules (Grattan 1992, 118). Other structures, not designed by Colter, included a water reservoir (#55578), a Fred Harvey mule barn and corral, a blacksmith's shop, and numerous rock walls and fences (Di Lucido 1991; Grand Canyon Natural History Company 1979).



Photograph 6. Promotional photograph of the original Phantom Ranch buildings, ca. 1922, looking south over Bright Angel Creek (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).



Photograph 7. Photograph showing construction of the main lodge at Phantom Ranch, ca. 1922. Note the stone walls and wood lintels above the windows (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

To make the ranch as self-sufficient as possible, ranch hands, including “Shorty” Yarberry, a former Texas cattle runner who arrived in the canyon in 1919, expanded Rust’s existing orchard which had succumbed to neglect by the early 1920s, by planting 18 peach, apple, pomegranate, and apricot trees. They also landscaped the area and planted cottonwood and sycamore trees around the ranch buildings for shade and installed an irrigation system to keep the orchard and other vegetation watered. An alfalfa field was planted near the orchard to provide feed for livestock, and rabbit runs and a chicken house were installed near the mule barn and corral to provide food for guests. For breakfast, the ranch offered local eggs and homemade nectarine jam (Thybonny 2001, 23).

Phantom Ranch was open to the public on June 12, 1922 (Grand Canyon Natural History Association 1979). Construction of the resort cost \$20,000, all of which was paid by the SFRR. An article published in a 1922 edition of the *Kansas City Star* noted that the completed hotel had,

“a large combined dining hall and restroom, three large cabins with wide sleeping porches for the accommodation of visitors and a caretaker’s cabin...The cabins have all the comforts of home—shower baths, running water and telephones” (*Kansas City Star*, 2 July 1922).

Colter’s work was also praised by writer Lewis R. Freeman in the Afterword of his 1923 book on the Colorado River:

“The commission for the work was given to Miss Mary E. J. Colter, already well known for her notable artistic successes...Working with the native red Supai sandstone of the canyon walls for building material, Miss Colter accomplished something that in my own experience is rivalled [sic] in its perfect fitness to its surroundings only by the mountain villages of Japan and the Himalayan frontiers of India...Phantom Ranch may be considered as a microcosm of what is to be striven for on a grand scale—something that fits as nearly as the wit and imagination of man can devise into the greater scheme of nature; something that “belongs” (Reprinted in Grattan 1992, 119).

Upon its completion in 1922, Colter renamed the tourist camp Phantom Ranch. Although originally named after a creek that flows from a deep narrows a mile above the ranch, the appellation evoked romantic images of ghouls and ghosts, and over the years, other stories of its origin emerged (Thybonny 2001, 4). In 1927, the *Kansas City Star* published the following explanation for the property's name in one of its articles:

"Phantom Ranch is so called for the excellent reason that it has a phantom...The phantom appears at night on the face of the mountain. It is white as all phantoms are and has something of the shape of an unveiled human" (*Kansas City Star*, 23 January 1927).

Another story reportedly dating to the 1930s, says First Man emerged from the underworld in the upper reaches of the ranch. In the spring of the year, the legend goes, ancestral spirits return there in the form of black butterflies (Thybonny 2001, 4). Other tales tell of John Wesley Powell's ghost wandering through the canyon at night, or of a mythical mist that envelopes Phantom Canyon's mouth (Cleeland 1986, 43).

During the early 1920s, the cost for a two day Fred Harvey mule trip from the South Rim to Phantom Ranch was \$19.00 (Cleeland 1986, 43). With the cessation of World War I, people in the United States began to travel again. Passenger travel on the SFRR hit its peak. Visitors to the Grand Canyon increased from 44,000 in 1919, to 100,000 in 1923, to 200,000 in 1929 (Grattan 1992, 37).

While private tourist enterprises flourished a half mile up Bright Angel Creek at Phantom Ranch, the U.S. Government began constructing buildings at the creek delta on the Colorado River. In the fall of 1922, the USGS installed a gauging station along the northern bank of the Colorado River that included a 50-foot-high recorder tower, a 410-foot-long span cable positioned 60 feet above the river, and a 12-ft-long by 14-ft-wide Operator's Cabin (#869) (Cleeland 1986a, 52). The station was placed near the NPS suspension bridge to take advantage of the accessibility and access to phone lines which were used to forecast flood stages several days in advance of their occurrence in Yuma and the Imperial Valley of California. The NPS supervised the landscape architecture aspects of the station's construction so that the built environment would be subordinate to its natural surroundings. They required that the exposed walls of the reinforced concrete recorder tower be faced with granite spalls and suggested that the stone and wood operator's cabin be modeled after Colter's buildings at Phantom Ranch (Cleeland 1986).

During construction of the gauging station, the NPS widened and improved more than 2 miles of the Rust's old Cable Trail on the south side of the Colorado River to facilitate the expedient transport of building materials (Cleeland 1986a, 52; USGS Gauging Station Report n.d.). Despite these improvements, it took more than 800-mule-days to pack building materials down to the site due to the precarious nature of the suspension bridge, which required mule loads to be less than 6 feet long and weigh less than 150 pounds (Cleeland 1986, 52). Upon completion of the gauging station, the NPS installed a single-circuit telephone line into the canyon to provide communication for Phantom Ranch residents and the USGS hydrographer (Cleeland 1986a, 53).

In 1924, the federal government proposed what would be their final offer to Coconino County in the struggle for control of the Bright Angel Trail. In exchange for ownership of the trail, the NPS agreed to construct a new South Approach Road to Grand Canyon Village. Although administrators and civic leaders in the gateway towns agreed that the deal would be beneficial to all involved parties, local opposition spearheaded by Senator Ralph Cameron prompted Coconino County to place the measure for popular vote on the 1924 ballot. The measure was soundly rejected on November 7, 1924. Immediately following the ruling, indignant NPS administrators began establishing camps, building necessary roads, organizing work crews, and purchasing supplies and equipment for the construction of their surveyed trail route (later known as the South Kaibab Trail) from the South Rim to the Colorado River.

Construction of the 6.5-mile-long South Kaibab Trail commenced on December 3, 1924 under the supervision of park engineer Miner Tillotson (Anderson et al. 2010, 5). Utilizing predominantly Mormon labor, work began at opposite ends of the trail with two crews of fifteen and twenty men. Arizona Strip resident, John Brown, led the crew at the Colorado River, and Chuck Seavey, a future CCC foreman, oversaw trail work below Yaki Point (Anderson 2000, 23). Using dynamite and air-compressed tools that had only recently been invented for modern road construction, the men blasted and carved a 4.5-foot-wide trail from the canyon walls (Photograph 8). Part of the work of the lower crew also included renovation of a 2-mile-long section of Rust's old Cable Trail from the Colorado River to the Tonto Plateau (Anderson et al. 2010, 5). Work on the trail was arduous and progress was often slow due to miscalculations regarding rock formations and the canyon's extreme temperatures, high winds, and sheer cliffs along most of the route (Anderson et al. 2010, 5; Gerke 2008). Additionally, resistance and ridicule by opponents of the trail, including the SFRR and Fred Harvey Company, placed unrelenting pressure on NPS management to complete the trail which was fraught with financial difficulties and continual construction delays (Anderson et al. 2010, 5).



Photograph 8. Photograph of a trail crew building the Yaki (Kaibab) Trail, date unknown. Note the use of air and power tools (visible at right) (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

After six laborious months of construction, the two crews met in mid-June 1925. The total cost of the trail at the time of its completion was nearly \$73,000, or \$30,000 more than originally estimated (Anderson et al. 2010, 5). The South Kaibab Trail was dedicated on June 15, 1925, and the first mule train descended the trail to Phantom Ranch nearly a month later on June 26, 1925 (Anderson et al. 2010, 5; Sutphen 1992, 83). The NPS named its new route the Yaki (also spelled Yaqui) Trail due to its inception and trailhead at Yaki Point. At the time of its dedication, the route was the first trail to be built by the NPS at the canyon and it stood unmatched as the "safest, most expedient, and most convenient rim-to-river trail in the Grand Canyon" (Anderson et al. 2010, 5).

Upon completion of the South Kaibab Trail as an alternative to the Bright Angel Trail, the NPS realized that they could further ensure their complete control over the Colorado River corridor by constructing a companion trail that would link the North and South Rims of the canyon. They also surmised that a Trans-canyon trail would advance their plans for the construction of tourist facilities at Bright Angel Point by enhancing hiker access into the canyon.

Although the NPS had made improvements to the lower two miles of Rust's Cable Trail in the late 1920s, the trail had not been maintained after Rust abandoned his tourist efforts in the canyon in 1919, and the majority of the route was in poor condition. Between 1925 and 1926, NPS crews rebuilt a 1.25 mile section of the gorge segment of the trail and continued south to Ribbon Falls by 1926. Prior to 1926, this portion of the trail was considered a northern extension of the Bright Angel Trail as it followed the Bright Angel Fault from the river to the North Rim. Between 1926 and 1928, however, the NPS constructed a new section of the trail from Ribbon Falls that turned away from the fault at Roaring Springs Canyon. They also made additional trail improvements through Granite Gorge, reducing the number of Bright Angel Creek crossings to six (Anderson 2010b, 3).

According to Anderson (2010b, 3), during the principal period of construction between 1925 and 1928,

the trail crew rebuilt the trail to NPS trail standards patterned after the South Kaibab Trail. They widened the path to the standard four to five feet, reduced grades, with few exceptions, to less than 20 percent (grades range from 12 to 24 percent), and in other ways improved the trail in terms of safety.

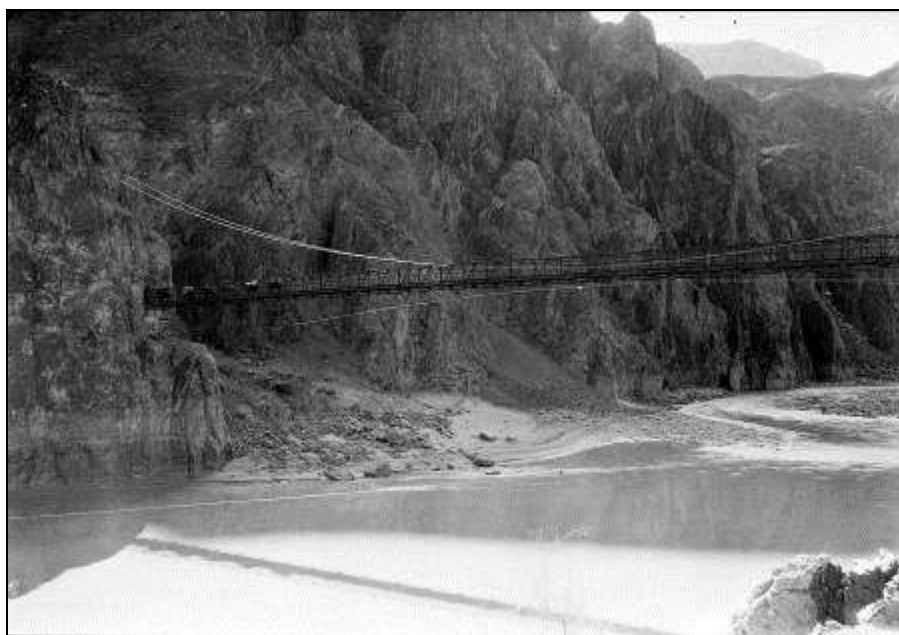
In association with the trail's construction, the NPS and Fred Harvey Company developed Yaki Point, near the trailhead of the southern route, for use as a staging area for mule trains used to pack supplies into the inner canyon. Between 1928 and 1929, the NPS and Fred Harvey Company built numerous structures at Yaki Point (South Kaibab Trailhead), including a stone mule barn, two residences, two sheds, and a garage. The primary purpose of the buildings was to house mules and handlers packing supplies into Phantom Ranch and the inner canyon along the South Kaibab Trail (Anderson 2010, 4-5).

The NPS also erected their first permanent structure near the mouth of Bright Angel Creek to the south of Phantom Ranch. The building, which was originally called the Caretaker's Cabin and later designated the Rock House (#55437), consisted of a single room frame building with a masonry foundation and corner piers. According to a 1934 Housing Survey form, the interior of the building contained a built-in sink and tongue and groove interior walls and had a maximum occupancy of two (Anderson et al. 2010, 6; Carter 1934; Cleeland 1986, 55).

The NPS also established a small campground, known as Cottonwood Campground, along Bright Angel Creek in 1927 to serve as a layover stop for mule parties traveling between the North Rim and Colorado River. Amenities at the campground coincided with visitor demographics and included numerous camp sites, picnic tables, piped water, and a telephone. The campground also had a caretaker's cabin (now used as a ranger station) that had a public room, a kitchen, and two storage rooms (Carter 1934). Use of the campground was free and campsites were available on a first-come, first-serve basis. The following year, the NPS also designated areas along the North Kaibab Trail at Roaring Springs and the South Kaibab Trail at Cedar Ridge for use as temporary undeveloped campsites (Anderson 2000, 24). As a result of these improvements and the construction of campgrounds elsewhere in the park, the number of campers at the Grand Canyon increased from 43,500 to 52,000 between 1927 and 1929 (Anderson 2000, 24).

With the Trans-canyon trail corridor nearly complete in 1928, the NPS decided to replace the swinging suspension bridge across the Colorado River with a stronger and more rigid structure. That January, the NPS established a temporary camp at the confluence of the river and Bright Angel Creek to house nine laborers and a cook during the bridge's construction. Construction of the bridge commenced on March 9, 1928. Similar to other early construction projects within the inner canyon, all materials had to be packed into the canyon by manpower and mule, including eight main cables which weighed more than one ton each. The cables were carried to the bridge site by 42 men, primarily Havasupai laborers, who spaced themselves along the 550-foot cables, slung them over their shoulders, and snaked them down the South Kaibab Trail (Sutphen 1992,

79). Work crews also began construction on a 105-foot-long approach tunnel on the south side of the Colorado River to access the bridge. The tunnel and bridge were nearly complete when ownership of the Bright Angel Trail was finally ceded to the federal government as part of Grand Canyon National Park on May 22, 1928 (Anderson 2000, 23; Anderson 2002, 20). Immediately following transfer of the trail, the \$1.00 toll previously charged by Cameron was rescinded, marking the closure of the last toll road or trail within the Grand Canyon (Anderson 1992, 37; Hughes 1967, 137–140; Sutphen 1991). Nearly three months later, on August 3, 1928, the suspension bridge was finally completed (Photograph 9). The bridge continues to span the Colorado River and is commonly referred to today as the Black Bridge or the Kaibab Suspension Bridge.



Photograph 9. Photograph of a mule train crossing the Black Bridge (also referred to the Kaibab Suspension Bridge), ca. 1934 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

With Fred Harvey mule trips becoming more popular by the mid-1920s, the Fred Harvey Company expanded its facilities at Phantom Ranch to include four new guest tents, two toilets on the banks of Bright Angel Creek, a combined coal and wash house, and a hay shed in 1926 (Anderson et al. 2010b, 5). The NPS also constructed a recreation hall (#55561) and shower and bath house (#55562) to the southwest of Colter's original development. The recreation hall measured 51 feet long by 38 feet wide and was constructed of wood frame with stone piers. The western two-thirds of the building contained an open recreation room with an exposed beam ceiling and the eastern third had a bathroom and showers. The building also had a large stone fireplace and two, 38-feet-long by 12-feet-wide open porches were present on its north and south sides. The shower and bath house was constructed almost entirely of stone and measured 38 feet long by 28 feet wide (Johnson et al. 1980). The following year, the NPS erected three adjacent two bedroom stone and wood guest houses (#55568–55570) to the west of the recreation hall in anticipation of increasing visitation to the ranch following completion of the Trans-canyon trail route. Although no signed drawings or plans for these buildings exist, Cleeland (1986, 67) asserts the later additions to the ranch, including the recreation hall, small cabins, the guide's quarters, and the shower house were most likely designed by Colter, as she was employed full-time as an architect for the Fred Harvey Company and SFRR during that period and the building designs bear her characteristic style. According to Cleeland (1986, 67), "it is doubtful that she would have tolerated another architect designing additions which might differ from her overall concept of Phantom Ranch." To transport building materials to the site during its

renovation, a cable tramway was installed from the recreation hall to the NPS suspension bridge in 1927 (Grand Canyon Natural History Association 1979).

In 1928, a second cable conveyor system was installed at the Grand Canyon by North Rim concessioners, the Utah Parks Company and the UPRR, between Bright Angel Point and Roaring Springs. The purpose of the cable system was to facilitate the installation of a state-of-the-art water pipeline that stretched from Roaring Springs to their newly-constructed lodge (Grand Canyon Lodge) on the North Rim (Anderson et al. 2010, 3). To supply water to their pipeline system, the railroad dammed Bright Angel Creek below the confluence of the creek and Roaring Springs; from the dammed creek, a sluice carried water downstream to a powerhouse, which created electricity to run a large pump that pumped water nearly 4,000 vertical feet up to a water tank on the North Rim (Berkowitz and Thybony 2005). Despite numerous upgrades to the system since its completion in 1929, Roaring Springs continues to supply water and electricity to Bright Angel Point.

On September 15, 1928, the Yaki Trail and newly-completed northern route were collectively designated the Kaibab Trail by the Utah Parks Company (Utah Parks Company 1928). Together, the completed trails spanned nearly 21 miles between the North and South Rims, and created the canyon's first (and only) NPS-constructed Trans-canyon travel route. Construction of the route, including the Kaibab Suspension Bridge, cost the NPS \$186,884.55 (United States Department of the Interior 1938). In the 1930s, the southern portion of the trail became known as the South Kaibab Trail and northern route was designated the North Kaibab Trail based on their locations relative to the Colorado River.

Immediately following the completion of the Trans-canyon trail route, the Fred Harvey Company expanded guest facilities at Phantom Ranch to include five two bedroom cabins (#55563–55565, 55567, and 55572) built in the same architectural style as those constructed the previous year (Anderson et al. 2010b, 5; Cleeland 1985:45; Unknown 1979). The Fred Harvey Company also increased the size of the original Phantom Ranch dining hall by adding an addition to its south end and built a circular corral comprised of 11 masonry piers as a dismount and “welcome” area for tourists riding the Fred Harvey Company mule trains (Cleeland 1985:45; Johnson and Crosby 1980). The expanded dining room had separate entrances for employees and guests, and the west side of the building was used for guest activities and provided a resting place adjacent to Bright Angel Creek (Photograph 10).

Construction of these facilities and an increasing number of overnight guests ultimately led to the replacement of the existing Phantom Ranch sewer system in 1929. The new sewage system was installed by the SFRR and consisted of a 6-inch-diameter pipe supported by rock piers. The pipeline stretched from Phantom Ranch to the Colorado River; raw sewage from the pipeline was dumped just west of Bright Angel Creek (Cleeland 1986, 47). By the end of 1929, the combined efforts of the NPS, Fred Harvey Company, and SFRR had created a lush inner canyon oasis for dignitaries and recreationalists seeking to experience the grandeur of the Grand Canyon (Photograph 11).

During the late 1920s and early 1930s, maintenance of the South and North Kaibab Trails was accomplished by two full-time NPS employees. One of the employees was assigned to the upper portion of the South Kaibab Trail between the South Rim and the Tip-off and the second employee maintained the remaining portion of the South Kaibab Trail between the Tip-off and the Colorado River, as well as a portion of the North Kaibab Trail between the suspension bridge and Phantom Ranch (Sutphen 1991). Seasonal employees were also hired by the Park Service for maintenance along the North Kaibab Trail, which was frequently damaged by heavy summer rains and flooding (Anderson et al. 2010b, 3). In part due to their continuous maintenance, the North and South Kaibab Trails gradually grew in popularity in the late 1920s, and by the early 1930s, the South Kaibab Trail replaced the Bright Angel Trail as the preferred travel route from



Photograph 10. Photograph showing guests relaxing near Bright Angel Creek to the west of the Phantom Ranch dining hall, date unknown (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).



Photograph 11. Photograph of Phantom Ranch, ca. 1929 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

the South Rim to the Colorado River (Sutphen 1992). As the only trail from the developed area of the North Rim to the inner canyon, the North Kaibab Trail also became a popular route during this time.

Once the NPS gained ownership of the Bright Angel Trail, numerous construction projects along the trail route commenced. In 1929, Park Superintendent M.R. Tillotson and Park Engineer C.M. Carrel allocated \$20,000 for the reconstruction of the trail; work began that same year. By May 1931, the pair had completed most of the reconstruction from the rim at Kolb Studio to Indian Garden (Photograph 12). The completed trail maintained an average gradient of less than 13 percent, with a maximum of 17 percent. The realignment of the trail required extensive reconstruction of Jacob's Ladder and the upper tunnel, as well as a complete re-routing along the slopes of the Bright Angel Fault (Anderson 2002, 23).

During the early years of NPS control in the 1930s, many of Cameron's structures, including the stone house, tent frames and Kolb Brothers photo studio at Indian Garden were razed. In 1931, the SFRR constructed a cable tramway from the South Rim to Indian Garden to transport materials for the construction of a new South Rim water system. The tramway was located adjacent to the Bright Angel Trail in the vicinity of Indian Garden on an eastern slope. Although the exact location of the system is not known, part of it is known to have been located in



Photograph 12. Photograph showing the completed realignment of the Bright Angel Trail from Kolb Studio on the South Rim toward Indian Garden , ca. 1935 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

the vicinity of the Three-Mile Rest House. A total of 2.5 miles of 6-inch-diameter water pipe was buried for the new system (Anderson 1998, 74; Anderson 2002a, 6).

The following year, the SFRR constructed two pump houses (one of which is known today as the Rehandling Pump House [#55390]) and a 70,000-gallon reservoir within the Garden Creek drainage at Indian Garden. The facility served to collect water at Indian Garden and pump it to the upper pump house at the South Rim. The NPS also built a two-room stone and frame Caretaker's Cabin in the area of Cameron's razed buildings, as well as two latrines north of and downstream from their newly-constructed cabin. The appropriate siting of sanitation facilities greatly increased the quality of the water supply at Indian Garden. Latrines were connected to the pump and sludge trench and were made available for visitor use (Anderson 2002, 22). Additionally, 350 feet of electrical line was installed from the Caretaker's Cabin to the Pump Station (Anderson 2002a, 6–7; JMA 2005, 92).

1933–1942 — The NPS and the CCC

By the early 1930s, the NPS and its private concessioners had made great strides in transforming the Grand Canyon into one of the most popular tourist destinations in the American West (Anderson 2000, 24). This progress was dampened, however, in 1933 due to budget shortages caused by the Great Depression. That year, President Franklin D. Roosevelt established numerous federal relief programs, including the Works Progress Administration and the CCC, to assist federal agencies with conservation endeavors as well as to provide work to thousands of unemployed American men. Of these programs, the CCC was the most popular and had a lasting effect on the Grand Canyon.

On May 29, 1933, the first two contingents of CCC workers arrived at the Grand Canyon (Anderson 2000, 26; MacMillan 1991, 39). CCC enrollees were divided and stationed at

numerous CCC camps established on the North and South Rims and in the inner canyon. One of these camps, known as the Bright Angel Campground or NP-3-A, was established in the inner gorge of the Grand Canyon in the vicinity of Phantom Ranch (Photograph 13). The location of the CCC camp was previously selected by NPS architects and engineers for the establishment of a large camp site to accommodate hikers and fisherman (Langley 1933).



Photograph 13. Photograph of CCC Camp NP-3-A, ca. 1935 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

The first task of the men stationed in the inner canyon was to build their campground. They moved boulders, graded the bank of Bright Angel Creek, planted cottonwood trees, installed an irrigation system, built a rock-walled restroom (#182), and erected tents and other temporary buildings (Cleeland 1986b, 55). A description of the CCC camp's appearance was prepared by a visiting Army officer in 1934:

First is seen the recreation field for volleyball and basketball and a white canvas Screen for outdoor movies, next to two parallel rows of large white pyramidal tents, framed and floored and provided with electric lights, the current for which comes from a gasoline engine. Each tent contains six Gold Medal cots and a small coal stove. The coal comes down the trail by pack mule, just like everything else. Seven large storage tents, also framed and floored, are joined to make a combined mess and recreation hall. The kitchen tent adjoins (William 1934, 4).

The camp was home to nearly 200 men from Company 818, the majority of who were Texas and Arizona natives. Recreational activities at the camp included basketball, baseball, volleyball, music classes conducted by the blacksmith, and silent films. The recreation hall had a small library, jigsaw puzzles, chess and checkerboards, domino sets, playing cards, and a radio (Cleeland 1986, 56). In 1934, the Phantom Ranch CCC camp received an award as the best of the 54 camps in the Arizona-New Mexico District (Cleeland 1986b, 56).

CCC enrollees stationed at the Bright Angel Campground and elsewhere in the central corridor were supplied by the United States Army's Seventh Pack Train, which operated a temporary, year-round camp at Yaki Point (South Kaibab Trailhead) between 1933 and 1936 (Anderson 2000, 31; MacMillan 1991, 58). The unit was comprised of army and civilian men, 50 pack mules, and 10 saddle stock divided into sections of twenty mules and four packers each (Anderson 2000, 31). Packers made daily trips into the canyon, five days a week, hauling loads of coal, mail, and food averaging six thousand pounds (Anderson 2000, 31). In three years of operation, the pack train reportedly never missed a delivery, in part due to the masterful engineering of the South Kaibab Trail which prevented the accumulation of snow and ice along the route.

One of the first and most significant projects completed by Company 818 during the early 1930s was the construction of the Colorado River Trail (commonly referred to as the River Trail). The trail, which stretched 2 miles from the mouth of Pipe Creek on the Colorado River to the Kaibab Suspension Bridge, was built by Company 818 enrollees between 1933 and 1936. CCC worker Louis Purvis worked on the Colorado River Trail during this period. He explained the strenuous work that was involved in creating and sustaining this trail in an interview on October 5, 1985. Describing his work on the Colorado River Trail, Purvis explained,

I resurfaced that area where the sandbar was close to the Silver Bridge on the cliff down below. Then he [the superintendent] sent me to Indian Garden after an air compressor. He gave me fifty or sixty kids to go do it. We brought that air compressor down the Corkscrew switchbacks down to the foot of Bright Angel Trail, and started the trail back toward the camp. I put some in front pulling, and some behind holding back, and a couple with bars to get it around the corner switchback, and two on the tongue, and we brought it down the trail. Then when we got it down there, he gave me orders to start breaking trail back toward a foreman by the name of Danny Campbell. So that's how we started the other end of Colorado River Trail (Interview with Louis Purvis, conducted by Susan Lamb, 1985).

Purvis' testimony is evidence of the difficult and laborious work that was required of the men that constructed the trail.

The NPS also used CCC enrollees stationed at the Bright Angel Campground to reroute and maintain segments of the Bright Angel and South and North Kaibab Trails (Photograph 14) and Photograph 15). Anderson (1988) describes changes to the Bright Angel Trail alignment during this period. He notes,

the first 1.82 mile segment which completely bypassed the Tonto Trail-Salt Creek alignment got underway in November 1929. Trail crews used tons of powder, compressed air jackhammers, as well as picks and shovels to manufacture a new trail through Tapeats Narrows along Garden Creek to the top of Vishnu Schist, then blasted down and across Salt Creek (which is not the same creek that is referred to as such today) perpendicular to the old trail to a lower point above Pipe Creek, then down a new Devils Corkscrew at maximum 16 percent grades to the creek bed. Construction costs totaled \$19,000 (Anderson 1998, 74).



Photograph 14. Photograph showing a CCC work crew repairing a switchback retaining wall along the upper Bright Angel Trail just below Kolb Studio, ca. 1935 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

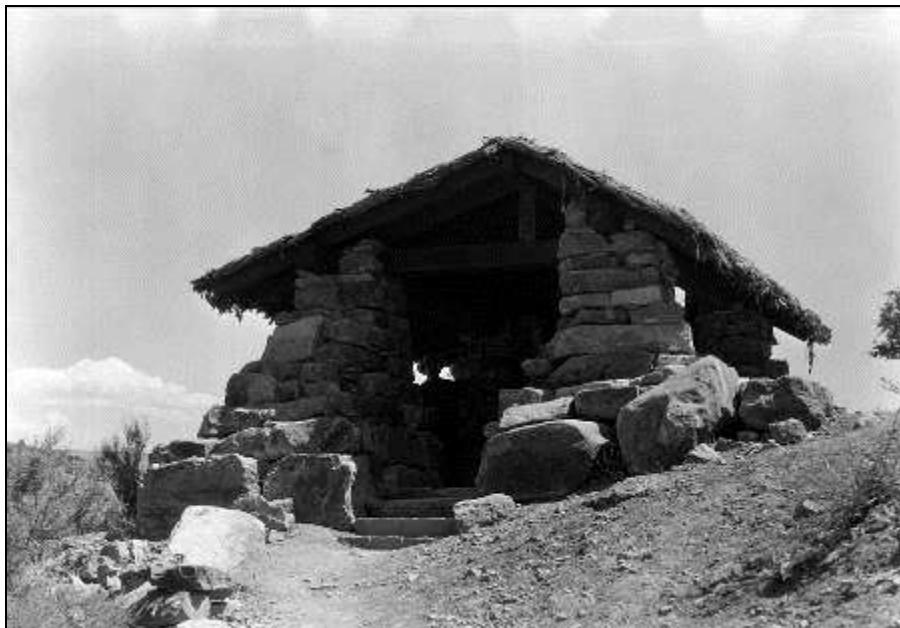


Photograph 15. CCC enrollees performing side ditching along the North Kaibab Trail, date unknown (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

He continues,

a second project ran from October 1930 through May 1931 as crews at Indian Garden and the Kolb Studio worked toward each other to reconstruct the upper trail. Allocated \$30,000 for this segment, Carrel chose a completely new alignment in order to reduce grades to an average of 13 percent (17 percent maximum), retaining on the path of Jacob's Ladder which required extensive blasting to bring the ledge out to the standard width of four feet. Crews 'shot through' the upper tunnel, built earlier by Cameron to access Mallery's Grotto, and routed the trail through it in a wide arc to gain the easiest grade possible above the Coconino Sandstone. Carrel added down slope, dry-rubble retaining walls and water breaks for safety before running out of money (Anderson 1998, 74).

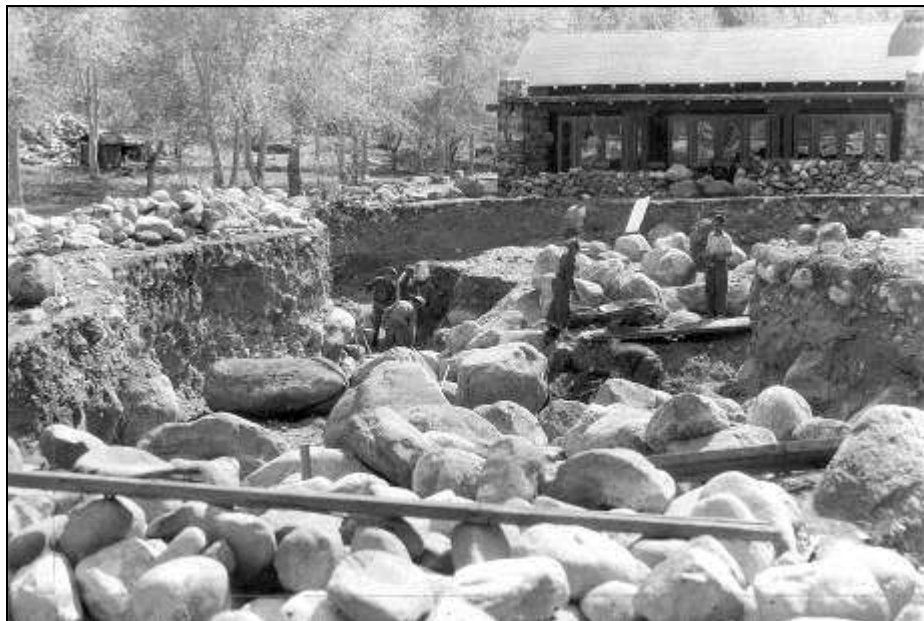
In addition to rerouting segments of the trail, between 1933 and 1939, CCC workers oiled portions of the Bright Angel Trail both by machine and by hand. Workers also constructed the shelters along the trail route, including the Three-Mile Rest House at the three-mile mark in 1935 (Photograph 16), and the Mile-and-a-Half Rest House at the one and one-half-mile mark and the River Rest House at the Pipe Creek-Colorado River Junction in 1936. By February 1938, the workers also completed construction from the base of the Devil's Corkscrew to the junction of the recently completed Colorado River Trail at the mouth of Pipe Creek, thereby connecting the Bright Angel Trail and Colorado River Trail with the South Kaibab Trail (Anderson 1998, 74).



Photograph 16. The CCC-constructed Three Mile Rest House, ca. 1936
(Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

Along the South and North Kaibab Trails, CCC laborers performed the strenuous work of side trail ditching, clearing rockslides, repairing erosion damage, installing and repairing water bars and guardrails, and resurfacing the trail with gravel (Anderson et al. 2010b, 3; Sutphen 1991; Sutphen 1992). They also performed emergency snow removal from upper portions of the North Kaibab Trail (Anderson et al. 2010b, 4). In addition to basic trail maintenance, other CCC projects in the region included the planting of cottonwoods and box elder trees in the vicinity of Bright Angel Campground; construction of spur trails from the North Kaibab Trail to upper Ribbon Falls and Clear Creek; completion of a tunnel, known as the Supai Tunnel, through the Supai group along the North Kaibab Trail; improvements to Cottonwood Campground; repainting the Kaibab Suspension Bridge; installing rip-rap to divert the channel of Bright Angel Creek; and the construction of an interpretative display and wooden case for fern fossils discovered during trail construction at Cedar Ridge (Grand Canyon Association 2005, 15; Anderson et al. 2010a; Anderson et al. 2010b; Stephenson 1933).

After 1933 and throughout the 1930s, the CCC also built numerous structures for the Fred Harvey Company at Phantom Ranch as well as several buildings for the NPS and USGS at Indian Garden and near the mouth of Bright Angel Creek. One of the most significant CCC projects at Phantom Ranch was the construction of a large swimming pool in 1934 (Photograph 17). The pool was constructed by 20 enrollees of Company 818 under the supervision of NPS Landscape Foreman Charles D. Carter. It was located in a boulder-filled floodplain north of the Recreation Hall and was fed by water from Bright Angel Creek. Although CCC reports written by Landscape Architect Alfred H. Kuehl in the 1930s indicated that construction of the pool would be finished by June of 1934, it was not completed until 1936. CCC enrollees were among the first to enjoy the pool, and for many years, it was a centerpiece of Phantom Ranch (Cleeland 1986, 47; Anderson 1998; Kuehl 1934; Langley 1934a). With increasingly heavy use through the 1960s, the pool became a maintenance and health hazard, however, and in 1972, it was filled in by the Fred Harvey Company with permission from the NPS (Cleeland 1986, 49). Many items were reportedly thrown into the pool at the time it was backfilled, including the original hand-carved doors of the recreation hall, a pool table, a piano, old oil burning stoves once used to heat the guest cabins, and items from the old blacksmith shop (Abbott 1978, 20; Cleeland 1986, 49).



Photograph 17. Photograph showing CCC Company 818 enrollees building the Phantom Ranch swimming pool, ca. 1934 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

Other CCC-constructed buildings at Phantom Ranch included a small, one-room residence known as the Packer's Cabin (#55420) and a mule corral. The design of the Packer's Cabin followed standard plans created by the NPS Branch of Plans and Designs developed in the 1930s to create similar structures during the busy years of CCC construction (Cleeland 1986, 56; Tweed, Soulliere, and Law 1977, 97). Both of the buildings were constructed for the NPS. The CCC also erected a cable tramway across the Colorado River west of the Bright Angel Creek delta as a means of gathering driftwood from a sandbar on the far side of the channel, and built two bridges over Bright Angel Creek, both of which had massive stone piers from which the bridge support cables were strung (Anderson et al. 2010b, 7; Cleeland 1986, 56). The tram was also useful for transporting CCC workers across the river during construction of the Colorado River Trail (Haines 1933, 4).

At Indian Garden, CCC workers constructed permanent shelters during these years, as well as a mule stable or barn and residences for the campsite caretaker and the Santa Fe Pump Station caretaker (Photograph 18) (Anderson 1998, 74). In 1935, CCC enrollees stationed at a side camp at Indian Garden constructed a Trans-canyon telephone line. The 18-mile long telephone line roughly paralleled the Bright Angel and North Kaibab Trails and consisted of a single, copper-weld wire line strung from 592 poles and cross-arms crafted of two-inch galvanized steel pipes (Cleeland 1986a). A two-mile-long spur line was also built along the South Kaibab Trail from the Colorado River to the Tip-off (Cleeland 1986a). The telephone lines were modified between 1938 and 1939 by the addition of a new cross-arm and a second circuit (Leonard et al. 2010, 53). At this time, some of the two-inch-pipe poles fashioned for the rugged canyon were moved to the Bright Angel and Cottonwood Campgrounds for campers to hang their packs on (Photograph 19) (Cleeland 1986b, 54). The Trans-canyon Telephone Line was listed in the NRHP on May 13, 1986. Today, contemporary plaques at the South Rim (#57226) and Phantom Ranch (#57227) pay homage to the work of the CCC on the historic telephone line.



Photograph 18. Photograph showing the CCC-constructed rest house at Indian Garden adjacent to the Bright Angel Trail, ca. 1936 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).



Photograph 19. Photograph showing re-use of an old Trans-canyon telephone pole as a pack hanger at Cottonwood Campground, ca. 1985 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

Steady visitation to the Cross Canyon Corridor trails continued under NPS management, and by 1936, annual traffic counts along the Bright Angel and Colorado River Trails totaled 20,607 users (Anderson 2002). Additionally, the North and South Kaibab Trails had more than 18,000 annual users, with the South Kaibab Trail alone reporting approximately 50 hikers per day (Sutphen 1992). In 1942, the CCC was disbanded and all CCC contributions to the Cross Canyon Corridor trails and the Grand Canyon region ceased.

1943–2011 — Mid-20th Century to Early 21st Century Improvements

Travel within the Grand Canyon continued to increase after the Great Depression and World War II, and by 1949, use of the North Kaibab Trail as a hiking trail rather than just a transportation corridor, was solidified when hiker Henry E. Braun reported that he travelled between the North and South Rims and back in a record time of 21 hours and 50 minutes (Sutphen 1992). In response to increasing tourism in the inner canyon, the NPS renovated the Bright Angel Campground with the installation of new grills and picnic tables in 1961 (Anderson et al. 2010b, 5). They also commenced construction on a Trans-canyon water system to carry water from Roaring Springs to the South Rim in 1965 (Anderson 2010b, 7).

Development within the Cross Canyon Corridor continued at a steady pace until December 4, 1966, when a large storm blew over the Grand Canyon and produced a flash flood along Bright Angel Creek. A total of 15 inches of rain fell on top of snowpack within a 6 hour period, causing Bright Angel Creek to rise 30 feet above its normal level for nearly three days (Photograph 20). The flood destroyed large segments of the newly-installed Trans-canyon Water System, and park rangers radioed the rim as they watched sections of the pipeline flow past them. Both the upper and lower portions of the North Kaibab Trail were also obliterated by the flood, although the section from the river to Roaring Springs sustained the worst damage. Additionally, all of the bridge crossings over the creek were destroyed, along with the 150 year-old cottonwood trees that once lined the creek; Phantom Ranch lost a bunkhouse, its USGS stream gauging station, and a sewer line to the rising waters of the creek.

After the floodwaters receded, the NPS awarded a contract modification to the water system contractor Halverson-Lent to reconstruct the pipeline and trail. As part of this reconstruction effort, a second pump house (now known as the North Pump House) was built at Indian Garden adjacent to the original 1930s Santa Fe Pump House and reservoir (JLR 2005, 107). Additionally, the North Kaibab Trail was widened and the rustic wooden bridges that once crossed Bright Angel Creek were replaced with aluminum structures with concrete foundations. When reinstalled, the trail was constructed wider than the original. The creek was also re-vegetated and new masonry walls were constructed to retain the new trail and pipeline along cliffs. Portions of the North Kaibab Trail above Roaring Springs were reconstructed and opened by 1969, but the lower portions of the trail did not re-open until the summer of 1971 (Anderson et al. 2010, 4–8; Avery 1969; Berkowitz and Thybony 2005; Houk 1981; Sharrow 1985; Sutphen 1992). By the close of 1970, the new water system could deliver up to 190 million gallons per year to the South Rim (Anderson 2000, 314–316).

By the 1970s, the Bright Angel, Colorado River, and South and North Kaibab Trails were among the most popular hiking trails for tourists to experience the Grand Canyon, and by 1979, the number of overnight visitors at Phantom Ranch and the Bright Angel Campground reached 48,000 a year (Grand Canyon Natural History Association 1979). In 1981, the four trails were designated as National Recreation Trails within the National Trails System. In 1982, day use estimates for the Bright Angel Trail reached 122,765, making it the most popular of the central corridor trails. The South Kaibab Trail, with 37,523 annual visitors, was the second most popular trail; estimates for the North Kaibab Trail were not provided (Underhill 1983, 2). In 1988, the same trails were designated as major transportation arteries of the canyon's Corridor Use Area. The North Kaibab Trail was classified as a Type 1, Level A corridor trail and continues to receive the



Photograph 20. Photograph showing Bright Angel Campground and debris flow from Bright Angel Creek during the 1966 flood. The Adirondack Shelter is visible near the right edge of the photograph (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

park's highest level of maintenance (Anderson et al. 2010b, 4). In 1997, all of the trails were determined eligible for inclusion in the NRHP (Reba Grandrud to Bruce Kilgore, August 2009, GRCA Trail Archives File).

Today, nearly 10,000 mule riders enter the canyon and backpackers spend nearly 50,000 nights camped in the central corridor each year (Thybony 2001, 25). Phantom Ranch continues to be the most popular tourist destination at the Grand Canyon. The ranch is currently designed to accommodate 92 overnight guests and its facilities are normally booked 22 months in advance (Thybony 2001, 5). The water pumping station at Indian Garden continues to supply thousands of gallons of water per day to the South Rim, and the campground serves as a designated area for hikers using the Bright Angel Trail (JLR 2005, 125).

History Graphic Information

History Graphic: None Submitted

Historic Graphic Caption: N/A

Analysis and Evaluation of Integrity

Cultural Landscape Inventory Name: Cross Canyon Corridor Historic District

Cultural Landscape Inventory Number:

Parent Cultural Landscape Inventory Name: Grand Canyon National Park Landscape

Parent Cultural Landscape Inventory Number: 85011

Park Name: Grand Canyon National Park

Park Alpha Code: GRCA

Park Org Code: 8210

Analysis and Evaluation Summary:

The Cross Canyon Corridor Historic District is a component landscape within the Grand Canyon National Park Landscape and is also a historic property eligible for listing in the NRHP under Criterion A for its association with early Euro-American exploration and tourist enterprises at the Grand Canyon; for its role in achieving the ascendance of public versus private interests; for its association with the rigorous efforts of the NPS to accommodate the Park's rapidly expanding tourism industry during the 1920s and 1930s; and for its association with the CCC and their influence on the built landscapes and trails within the District. Under Criterion B, the District is eligible for listing in the NRHP for its association with Arizona politician and entrepreneur, Ralph Cameron who, along with others, developed the Bright Angel Trail in the 19th century. The Cross Canyon Corridor Historic District is also eligible for listing in the NRHP under Criterion C for its association with prominent architect, Mary E. J. Colter, who designed the original buildings at Phantom Ranch; for the engineering accomplishments of the South Kaibab Trail, Colorado River Trail, and Kaibab Suspension Bridge; and for its collection of NPS Rustic-style architecture.

Due to its size and complexity, the District is organized into ten discrete Landscape Areas: Bright Angel Trail Landscape Area, Indian Garden Landscape Area, Colorado River Trail Landscape Area, Phantom Ranch Landscape Area, South Kaibab Trail Landscape Area, Yaki Point (South Kaibab Trailhead) Landscape Area, North Kaibab Trail Landscape Area, Bright Angel Campground Landscape Area, Cottonwood Campground Landscape Area, and Roaring Springs Landscape Area. The analysis and evaluation of nine of these Landscape Areas is based on two field reviews conducted by LSD in October 2009 and May 2011; information regarding the Indian Garden Landscape Area was adapted from the CLR prepared by JMA in 2005. Although four of the landscape areas (Indian Garden, Cottonwood Campground, Bright Angel Campground, and Roaring Springs) do not retain sufficient integrity to be individually eligible for listing in the NRHP, these areas are important landscapes and contribute to the overall integrity of the Cross Canyon Corridor Historic District. The remaining Landscape Areas within the District have changed very little since its period of significance (1890–1942). Nearly all of the buildings and structures dating to the District's period of significance at Yaki Point (South Kaibab Trailhead), Phantom Ranch, and Cottonwood Campground, as well as those along the Bright Angel Trail have undergone few alterations and continue to retain their integrity of materials, design, and workmanship. Additionally, due to its predominantly isolated location within the inner canyon and protective resource management practices of the NPS, the District also retains its integrity of feeling, setting, and association.

Aspects of Integrity

To determine if the Cross Canyon Corridor Historic District retains the level of integrity required for listing in the NRHP, the physical characteristics of its ten Landscape Areas and their ability to convey their significance must be evaluated. The physical features of the District must convey their significance through a combination of seven aspects or qualities of integrity defined by the NRHP. These aspects include—location, design, setting, materials, workmanship, feeling, and association. The following narrative provides an evaluation of these aspects as they relate to the four trails (Bright Angel Trail, Colorado River Trail, North Kaibab Trail, and South Kaibab Trail) and six development areas (Indian Garden, Phantom Ranch, Bright Angel Campground, Yaki Point (South Kaibab Trailhead), Roaring Springs, and Cottonwood Campground) that comprise the District. Further discussion examines whether modifications to landscape elements occurring after the period of significance have preserved or altered the individual integrity of the ten Landscape Areas.

LOCATION—Retains integrity

Overall, the Cross Canyon Corridor Historic District retains its integrity of *location*. All four trail alignments within the District continue to follow the same general alignment as when they were originally constructed. In particular, the Bright Angel Trail and North Kaibab Trail have followed Bright Angel Fault and the Garden Creek and Bright Angel Creek drainages since 10,000 BC, when archeological evidence suggests that these informal trail routes were traversed by Native Americans to access seasonal resources in the inner canyon. Both of the trails were formally developed for tourism by private entrepreneurs Ralph Cameron and David Rust between 1890 and 1906. During the late 1920s and 1930s, additional improvements were made by the NPS and CCC to sustain the alignment of the trails. While the majority of these modifications included the construction of bridges, rest houses, and trail features, such as native stone retaining walls, steps, and drainage features, upper portions of both trails were rerouted to reduce grades. Additionally, the lower section of the North Kaibab Trail located within the “Box” was also realigned to reduce the number of Bright Angel Creek crossings along the route. Due to their location along the schist and granite cliffs of the canyon and the engineering required for their construction, realignments along the South Kaibab Trail and Colorado River Trail have historically been uncommon. Additionally, on-going maintenance and repairs required for all of the trails due to hiker and pack animal traffic and the harsh environment of the canyon have not affected the integrity of location for the trails, and today, the spatial relationship of the trails, their buildings and structures, and their circulation patterns relative to the natural systems and topographic features of the surrounding terrain remain in generally the same location as during the District’s period of significance (1890–1942).

Buildings and structures within the Phantom Ranch, Bright Angel Campground, Cottonwood Campground, and Yaki Point (South Kaibab Trailhead) Landscape Areas of the Cross Canyon Corridor Historic District also retain their integrity of location. The largest of these areas, the Phantom Ranch Landscape Area, contains 39 buildings and structures. Of these, 32 were constructed by the Fred Harvey Company and the SFRR, the USGS, the CCC, and the NPS during the District’s period of significance. Similarly, the Yaki Point (South Kaibab Trailhead) Landscape Area, which was developed in 1926 by the NPS as a mule staging area following the completion of the South Kaibab Trail, also contains eight buildings and structures that date to the NPS-era (1919–1932). Additionally, the majority of the small-scale features within these areas, such as water spigots, retaining walls and fences, benches, hitching bars, and signage also remain in their original locations and retain integrity, as do the dirt footpaths that connect them.

DESIGN—Retains integrity

The *design* of the Cross Canyon Corridor Historic District reflects the initial efforts of both private entrepreneurs and the NPS to promote tourism and improve access to inner canyon resources at

the Grand Canyon. Formally constructed by entrepreneurs Niles Cameron, Pete Berry, and others in 1890, the Bright Angel Trail was the first of the trails in the Cross Canyon Corridor Historic District to provide access to the inner canyon and the Colorado River. Similar to other early trails at the Grand Canyon, the trail was originally built for the purpose of conveying burros to transport mining equipment and ore in and out of the inner canyon. However, as the personal gain from mining resources waned following the arrival of the Grand Canyon Railway in 1901, Cameron began to focus on the scenic resources of the canyon and the growing tourism industry, which other entrepreneurs such as David Rust had already begun to pursue as early as 1903 at the North Rim and on the Colorado River. By the early 1920s, other private concessioners, such as the Fred Harvey Company, the UPRR, and the SFRR, also realized the inner canyon's potential for tourism and economic wealth, and developed tourist facilities on the North Rim (e.g., the North Rim Lodge) and at the Colorado River (Phantom Ranch) to compete with Cameron's tourist camps on the South Rim and at Indian Garden.

When the NPS acquired the Park in 1919, one of its first goals was to establish authority and consolidate control over the area, particularly at the already thriving tourist areas on the South Rim and within the central canyon corridor. After numerous failed attempts to acquire the Bright Angel Trail from Ralph Cameron and Coconino County, the NPS built the South Kaibab Trail and the North Kaibab Trail and made modest improvements to other inner canyon trails, including the Bright Angel Trail, between 1921 and 1928. Ultimately, they succeeded in acquiring the trail alignment, which was

Of all the developed areas within the District, the Phantom Ranch Landscape Area best retains its integrity of *design*. The ranch was originally designed in 1922 by master Fred Harvey Company architect, Mary E. J. Colter. Because the ranch was built to accommodate mule riders, her design recalled a western ranch with a central lodge and “scattered” dude cabins. Colter's buildings, which included a dining hall, three guest cabins, and a manager's cabin, were built in the Craftsman architectural style and utilized rustic materials such as wood and native stone that was collected from the inner canyon. Although later buildings were added to the ranch by the Fred Harvey Company and NPS to accommodate increasing numbers of tourists in the late 1920s and 1930s, the architectural style, scale, and construction materials of these buildings were similar to those originally designed by Colter. Today, the dining hall continues to remain the focal point of the ranch, with the guest cabins and other facilities forming an arch, or semi-circular arrangement, around its periphery. Additionally, the North Kaibab Trail continues to function as the main thoroughfare for the ranch, with numerous footpaths, many of which remain in their original condition, extending from it.

While it is unclear whether the trails (i.e., the tread, cross section, or alignment) and the NPS and CCC-era buildings and structures within the other development areas of the District were formally designed or engineered, traditional construction methods of these types of features have not changed significantly since the CCC-era. Nearly all of the buildings and structures identified within the Cross Canyon Corridor Historic District dating to the NPS and CCC eras were designed in the NPS Rustic architectural style, including the Mile-and-a-Half, Three-Mile, Indian Garden, and River Rest Houses along the Bright Angel Trail; the NPS and Fred Harvey Residences and Sheds and Fred Harvey Mule Barn at Yaki Point; the Ranger Station and Rock Residence at Indian Garden; and the Ranger Station at Cottonwood Campground. All of these properties feature wood construction, front-gabled steeply-pitched overhanging roofs, and foundations, walls, and piers built of locally-available stone—all hallmarks of NPS Rustic design. The NPS and CCC also built retaining walls, steps, footbridges, and drainage structures along the Bright Angel Trail, South Kaibab Trail, and North Kaibab Trail out of native stone and hand-hewn logs in an effort to blend these features with the surrounding landscape. Although maintenance and on-going modifications and repairs are required to the buildings, structures, and trails to address erosion and/or user impacts, these necessary modifications have not affected the vernacular characteristics of these properties and they continue to retain their integrity of *design*.

The CCC-constructed Trans-canyon Telephone Line, visible within all ten of the District's landscape areas, also retains its integrity of *design*. The alignment and construction of the telephone line still conveys the conscious design decisions to site poles where necessary to negotiate the steep slopes and clear ridgelines, its inter-relationship with the trail alignments and their existing drainages, as well as the types of materials and construction that were prevalent at that time. Similarly, the location and design of the Kaibab Suspension Bridge has not been altered since completion of the structure in 1928.

SETTING—Retains integrity

The Cross Canyon Corridor Historic District retains its integrity of *setting* as the physical features of the Landscape Areas have maintained their relationship to the canyon's overall surroundings. The Landscape Areas of the District as well as the canyon itself have remained relatively unchanged since the period of significance (1890-1942) except for changes incurred by such natural processes as flooding, weathering and erosion. Additionally, the natural systems, geological features, topography, vegetation, spatial organization, and views and vistas preserve an overall wilderness setting for the District. Although the trails and development areas have been modified and improved over time, the majority of these alterations have preserved the District's integration with the canyon's landscape. Likewise, the buildings and structures within the District remain integral to their original setting and reflect their surrounding environment through the incorporation of native materials.

MATERIALS—Retains integrity

The majority of original construction that was completed by the NPS, Fred Harvey Company, SFRR, USGS, and the CCC within the 10 landscape areas of the Cross Canyon Corridor Historic District remains largely intact. Characteristic of construction in limited-access areas, the trails of the Cross Canyon Corridor Historic District were built with whatever materials were readily available. The trails typically have an earthen tread held in place with wooden logs or native stone. Non-durable materials such as wood have likely been replaced and thus post-date the period of significance. Additionally, a couple of earthen treads along the Bright Angel Trail are held in place with old railroad ties which may date to the SFRR construction projects of the 1930s. Vegetation also appears to have remained native to the area and the topography and views and vistas visible from key vantage points within the District are also largely unchanged. A notable exception is Bermuda grass that was most likely brought in by the pack animals' feed or waste and survives only in areas where there is a perennial source of water.

Although many of the trail features, such as their native stone walls/retaining walls, steps, and trail edging post-date the period of significance, the structures are built of compatible materials and reflect the construction methods utilized by the NPS and CCC and do not adversely affect the District's integrity of *materials*.

WORKMANSHIP—Retains integrity

Workmanship of the District reflects the collaborative efforts between the NPS and New-Deal era federal works programs such as the CCC. In addition, the District represents the work of master architect, Mary E. J. Colter, who designed the original buildings at Phantom Ranch in 1922. Colter also designed six structures on the South Rim of the Grand Canyon, four of which were collectively designated as a National Historic Landmark in 1987. Colter drew her inspiration from nature and Southwestern cultural traditions and used these aesthetics to create free-form architectural designs that utilized organic materials that mimicked their natural setting. These design principles served as the basis for the development of the NPS Rustic architectural style, which became the most common architectural form at the Grand Canyon and other National Parks during the 1920s and 1930s.

Numerous examples of Rustic-style architecture constructed by the NPS and CCC are present in the Cross Canyon Corridor Historic District. Most of these buildings, as well as Colter's original buildings at Phantom Ranch, have been altered only minimally since the District's period of significance and all are in fair to good condition. In addition to their adherence to Rustic style design principles, another character-defining feature of the NPS and CCC structures is their sensitive and often frugal use of site-specific materials—many times in creative ways—to compensate for the availability and costs of materials during the Great Depression. The Trans-canyon Telephone Line, a contributing structure of nearly all of the Landscape Areas within the District, is evidence of this trend as the poles of the line are constructed from galvanized pipe, a material that was commonly used for water conveyance during that time.

FEELING—Retains integrity

The Cross Canyon Corridor's first trail, "Cameron's Trail" (Bright Angel Trail) was originally developed between the 1880s and the 1920s to transport prospective sources of ore and minerals in support of a burgeoning canyon mining industry. It is assumed that the feeling of the inner canyon during this time was one of exploratory excitement for gaining wealth, "settling the west", and a forging a utilitarian supply line. The integrity of feeling that would have existed during the Cameron-era does not exist today.

As the personal gain from mining resources waned however, Cameron began to focus on the scenic resources of the canyon and the growing tourism industry, which other entrepreneurs such as David Rust had already begun to pursue as early as 1903 at the North Rim and on the Colorado River. The NPS took an active role in the management and development of these facilities after gaining administrative control of the park in 1919, and the integrity of feeling for the period following this transition (1919–1942) has remained relatively unchanged. Additionally, NPS rehabilitation and maintenance of CCC-era buildings and trail improvements in the modern era have contributed to a well-preserved sense of place for recreationists. While feeling is of a subjective nature, the experience at the North and South Rims of the canyon is related to the overall magnitude and scale of the natural force that created it—it is a "sense of wonderment". Many visitors describe it as awe-inspiring, contemplative, or exciting. The feeling of the trail landscapes is much different as the viewer drops below the level of the canyon's rim. Descending into the canyon presents a multitude of feelings dependent on the land forms, topography, views, vegetation, climate, and personal frame-of-mind. Visitors travelling the full length of the Trans-canyon route sense excitement, anticipation, and many times—trepidation of the "journey" ahead of them.

While the number of visitors has greatly increased in recent years, the vastness of the canyon and the setting of the District's landscape still provide a sense of isolation and humbleness that allows the visitor to experience the same feelings mentioned above, contributing to the Cross Canyon Corridor District's retention of integrity of feeling.

ASSOCIATION—Retains integrity

The existing trails, buildings, and structures within the Cross Canyon Corridor Historic District are directly associated with early tourist and administrative enterprises in the inner canyon, the CCC federal relief program, and the implementation of NPS Rustic-style architectural principles of the 1920s and 1930s. These features convey a direct link to the historic events which shaped both Grand Canyon National Park as a whole and the ten landscape areas of the Cross Canyon Corridor Historic District between 1918 and 1942—the development of tourism and recreation on publicly-owned lands.

Overall Integrity Assessment of the Landscape Areas

BRIGHT ANGEL TRAIL LANDSCAPE AREA

While much of the Bright Angel Trail has been rerouted to lessen gradients and avoid drainages with the objective of making it more sustainable, the CCC-era buildings and structures along the trail still retain their original locations, settings, design, materials, workmanship, feeling, and association. Structures and modifications made subsequent to the period of significance do not detract from the overall integrity of the Bright Angel Trail Landscape Area. The restroom buildings and additional native stone walls/retaining walls and steps that have been built since 1942 are consistent with the scale and design of the CCC buildings and employ similar materials, construction methods, and visible workmanship. Integrity of the Bright Angel Trail Landscape Area is retained.

INDIAN GARDEN LANDSCAPE AREA

Indian Garden is an oasis of water and lush vegetation located within a generally arid environment. This sliver of greenery created by the perennially-wet Garden Creek is located 4.5 miles down the Bright Angel Trail and 3,000 feet below the South Rim of the Grand Canyon. The shady spot rests upon the Tonto Platform of the inner canyon between two steep cliffs. The Indian Garden Landscape Area is currently used, as it was historically, as a rest stop for tourists and campers traversing the Bright Angel Trail.

The Indian Garden Landscape Area has changed substantially over time, both during and after the period of significance. Initial development of Indian Garden occurred in 1903 when Cameron bought mining claims and water rights to the area and established a camp adjacent to the Bright Angel Trail on the edge of the Tonto Platform (JMA 2005, 52). Because of frequent flood events that required reconstruction of the landscape, and the need to continually redevelop the site to meet the needs of visitors and park personnel, the NPS has rehabilitated Indian Garden several times. The most marked changes occurred in the late 1920s and 1930s, when the NPS removed Ralph Cameron's tent camps and tourist concession facilities and implemented their own plans in conjunction with the CCC and SFRR; in the 1960s, when the NPS added more buildings and rearranged the spatial organization; and in the late 1980s, when the NPS created entirely new spaces, constructed and relocated several buildings and structures, and altered much of the historic character that was present between 1903 and 1942. As a credit to the designers of the 1989 rehabilitation, however, new features and work was completed in such a way as to be generally compatible with the historic character, as well as the character of the surrounding inner canyon landscape.

In sum, the analysis and evaluation of the Indian Garden landscape shows that, as a whole, the area has suffered impacts to its integrity. Although some of the seven aspects of integrity were shown to exist, the most important aspect of the site, integrity of design, is not retained. The physical characteristics of the landscape have changed to such a degree that little historic character remains that would present a holistic understanding of how the landscape appeared between 1927 and 1942. Additionally, the alterations made in 1989 are not easily reversed, again reinforcing the landscape's lack of integrity. In this landscape, the lack of most of the tangible aspects of integrity—design, materials, and workmanship—outweigh the retention of other intangible aspects of feeling and association.

COLORADO RIVER TRAIL LANDSCAPE AREA

The Colorado River Trail was constructed by enrollees of CCC Company 818 between 1933 and 1936 to connect the Bright Angel Trail and South Kaibab Trail. The trail was hewn from the granite and schist cliffs above the Colorado River using explosives and air-powered tools. As such, the trail continues to follow its original alignment and has not been altered. As with other

trails within the District, on-going maintenance and repairs to the trail's features, which include dry-laid stone retaining walls, water bars, and edging, are necessary due to hiker and pack animal use and erosion, and as a result, many of these original features have been reconstructed or replaced. Additionally, the only buildings and structures within the Landscape Area—the Silver Bridge and waterless restroom facility near the trail's inception—postdate the District's period of significance. While the Silver Bridge is discordant with the surrounding landscape due to its scale and construction materials, the restroom building and modified trail features are consistent in design to other Rustic style buildings built by the NPS and CCC within the District. As these properties utilize similar construction methods and materials, they do not detract from the overall integrity of the Colorado River Trail Landscape Area. The Landscape Area continues to retain its integrity of location, materials, workmanship, association, feeling, setting, and design.

PHANTOM RANCH LANDSCAPE AREA

The Phantom Ranch Landscape Area was initially developed in 1906 by Utah entrepreneur, David J. Rust, for use as a small outpost and tent camp for inner canyon tourists, trappers, and prospectors. Following Rust's abandonment of the camp in 1910, the area was acquired by the Fred Harvey Company and SFRR, who spent \$20,000 on the construction of a new lodge for inner canyon tourists. This development, which was later known as Phantom Ranch, was completed in 1922 and contained three guest cabins, a lodge, and a caretaker's cabin designed by notable architect, Mary E. J. Colter. Also that year, the USGS constructed its first facilities—a small residence and river gauging equipment—along the north bank of the Colorado River near the mouth of Bright Angel Creek. During the late 1920s and 1930s, the NPS, Fred Harvey Company, and SFRR added numerous buildings and structures to these areas, largely in response to increased inner canyon tourism resulting from the completion of the Kaibab Trail. Several years later, the CCC also made numerous improvements to buildings and structures within in the landscape area; however these modifications do not detract from the overall integrity of the Phantom Ranch Landscape Area as the majority of these additions and alterations adhered to the NPS Rustic architectural style and incorporated locally-sourced materials into their designs, allowing them to blend with the natural landscape of the inner canyon.

Although flooding of the Colorado River, modern maintenance and repairs, increased visitation and tourist demands, and the installation of modern facilities has somewhat altered the overall setting and design of the Phantom Ranch Landscape Area, the landscape continues to remain much as it was during the period of significance. Nearly all of the buildings dating to the period of significance remain at the ranch today and most retain their original location, setting, design, material, workmanship, feeling, and association. Integrity within the Phantom Ranch Landscape Area is therefore retained.

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

The Bright Angel Campground was established by the NPS in 1936; the site was one of six campgrounds planned by the NPS along the banks of Bright Angel Creek. Although the campground also served as a CCC camp (Camp NP-3-A) for Company 818 enrollees between 1933 and 1936, only one of the 39 structures originally built by the CCC during their occupation of the area remains. This building, which currently functions as a restroom building, was rehabilitated by the NPS in the 1960s as part of an improvement project and no longer retains integrity. The NPS also built a second structure, known today as the Adirondack Shelter, to the southeast of the restroom building and replaced numerous retaining walls and footpaths. Additionally, due its proximity to the west bank of Bright Angel Creek, the campground has been frequently damaged by flooding and many of its original features dating to the District's period of significance have been destroyed and replaced. Because of these alterations, the integrity of the Bright Angel Campground Landscape Area is not retained.

SOUTH KAIBAB TRAIL LANDSCAPE AREA

The South Kaibab Trail was constructed by the NPS between 1924 and 1925. The 6.4-mile-long trail was built as an alternative route to the Bright Angel Trail to access the Colorado River and inner canyon. Between 1933 and 1939, the trail was improved by the CCC, which built numerous structures along the route, many of which remain intact today. Similar to other inner canyon trails at the Park, the South Kaibab Trail and its associated features, including native stone retaining walls, stone and log water bars, and steps, have required on-going maintenance and repairs in the years postdating its period of significance. Additionally, the only buildings within the Landscape Area—the waterless restroom facilities at Cedar Ridge and the Tip-off—were constructed after 1942. These buildings as well as the modified trail features do not detract from the overall integrity of the landscape as they utilize similar construction methods and materials to other buildings and structures elsewhere in the District that were built within its period of significance. The South Kaibab Trail Landscape Area continues to retain its integrity of location, materials, workmanship, association, feeling, setting, and design.

YAKI POINT (SOUTH KAIBAB TRAILHEAD) LANDSCAPE AREA

Since the completion of the South Kaibab Trail in 1925, the Yaki Point (South Kaibab Trailhead) Landscape Area has functioned as a staging area for pack trains delivering supplies to the inner canyon. Of the 19 buildings and structures present at Yaki Point (South Kaibab Trailhead) today, eight of these were built by the Fred Harvey Company and NPS between 1926 and 1928. All of these buildings are in good condition and retain their original locations, design, materials, workmanship, feeling, and association. Although the overall setting of the built environment has been changed by the modern development related to visitor use of the South Kaibab Trail, the natural setting remains the same as it did historically and the expansive views of the inner canyon remain. Structures and modifications made subsequent to the period of significance do not detract from the overall integrity of the landscape. The restroom building and additional native stone walls/retaining walls that have been built since 1942 are consistent with the scale and design of the Fred Harvey Company and NPS buildings and employ similar materials, construction methods, and visible workmanship. Therefore, integrity of the Yaki Point (South Kaibab Trailhead) is retained.

NORTH KAIBAB TRAIL LANDSCAPE AREA

Since its construction in 1928, the North Kaibab Trail Landscape Area has undergone a significant amount of change. Due to its topography and proximity to Bright Angel Creek, the trail requires constant maintenance and upgrades, and many of its trail features are routinely replaced. Additionally, many of the original features of the trail have been destroyed by rock slides, flooding, and other forces of erosion, which have necessitated multiple reroutes of the original trail alignment. The most notable reroute occurred in 1966, when a flash flood along Bright Angel Creek obliterated both the lower and upper portions of the trail. When the floodwaters receded, sections of the trail were widened to its current width, its footbridges were replaced, and new masonry walls were constructed in various locations along its alignment. While these modifications to the trail have affected its integrity of location and design, the landscape area continues to retain its integrity of materials, workmanship, feeling, association, and setting. Modifications made subsequent to the period of significance do not detract from the overall integrity of the landscape area as they employ similar materials, construction methods, and visible workmanship and are consistent with the scale and design of other features documented within the District. For these reasons, the integrity of the North Kaibab Trail Landscape Area is retained.

COTTONWOOD CAMPGROUND LANDSCAPE AREA

Cottonwood Campground was established by the NPS in 1926 as a layover destination for NPS staff and hikers traveling between Phantom Ranch and the North Rim. Although the campground also served as a fly camp for CCC enrollees building a spur trail from the North Kaibab Trail to Upper Ribbon Falls, no evidence of their brief occupation of the area remains. The campground contains one contributing building, the Cottonwood Ranger Station (formerly known as the Caretaker's Residence or Halfway House), which was constructed in its present location by the NPS in 1927. Due its location on the east bank of Bright Angel Creek, the campground has been frequently damaged by flooding and many of the original features dating to the District's period of significance have been destroyed. Additionally, the Landscape Area has been modified extensively by improvement projects completed by the NPS in 1985 and 1993. As a result of these projects, several of the original structures located within the campground were demolished and replaced, including a generator building, pit toilet, and storage building to the north of the Cottonwood Ranger Station. Additionally, the existing camp sites were enlarged, combined, closed, and/or relocated, and the original layout of the campground was modified by tree removal, site leveling, pack pole installation and removal, the installation of flood control structures along Bright Angel Creek, ramada and trail construction, and the installation of drinking water faucet (Sharrow 1985). Integrity is not retained.

ROARING SPRINGS LANDSCAPE AREA

The Roaring Springs Landscape Area has been the source of water for both the North and South Rims of the Grand Canyon since 1966. Although a sluice, pumphouse, and power house were installed by the UPRR at the confluence of Roaring Springs and the Bright Angel Creek in 1928, no evidence of this water conveyance system remains in the landscape area today. The current facilities are associated with the operation and maintenance of the Trans-canyon Water System and most were built in the area after the District's period of significance between 1965 and 1970. Only one structure—a remnant section of the original UPRR cable tramway—dates to the period of significance. The lack of buildings and structures dating to the District's period of significance, coupled with the modern upgrades during completion of the Trans-canyon Water System cause the Roaring Springs Landscape Area to lack sufficient historical integrity.

Landscape Characteristics

1. ARCHEOLOGICAL SITES:

Cultural resource surveys conducted by the NPS at Grand Canyon National Park have resulted in the identification of at least 86 archeological sites within and adjacent to the ten landscape areas of the Cross Canyon Corridor Historic District. Eighteen historic archeological sites dating to the District's period of the significance and 1 prehistoric site contributing to the District's period of the significance have been recorded by the NPS during archeological investigations at the canyon. The remaining 67 sites are associated with the prehistoric occupation of the Grand Canyon and are therefore considered non-contributing to the District because they are not within the period of significance. The contributing archeological sites consist predominantly of abandoned trail alignments and remnants of early mining activities and tourist ventures within the canyon. Nearly all the archeological sites identified within the District are unmarked and not noticeable to the casual recreationist.

BRIGHT ANGEL TRAIL AND INDIAN GARDEN LANDSCAPE AREAS

The majority of the archeological sites within the Cross Canyon Corridor Historic District are located in the vicinity of the Bright Angel Trail and Indian Garden. Nearly all of these sites date to the late 19th and early 20th centuries when prospectors searched these areas for valuable minerals and entrepreneur Ralph Cameron recognized the trail's potential for tourism. Other historic archeological sites recorded in these areas include check dams, masonry walls, and artifact scatters. Additionally, at least one site—AZ B:16:165(ASM)—is associated with the SFRR's cable tramway system, which was constructed in 1931 to transport equipment and supplies between the South Rim and Indian Garden during construction of the water system. The tramway was removed in 1932, following the construction of the water system.

THE NORTH KAIBAB TRAIL LANDSCAPE AREA

Archeological sites contributing to the District have also been discovered along the North Kaibab Trail. Historic sites associated with the North Kaibab Trail include a camp and associated artifact scatter, a transportation/communication structure, and a rock cairn.

THE PHANTOM RANCH LANDSCAPE AREA

The three historic archeological sites recorded within the Phantom Ranch Landscape Area consist of masonry walls and an artifact scatter, remnants of the old USGS gauging station on the north bank of the Colorado River in the Bright Angel Creek delta, and a grave for NPS trail foreman Rees B. Griffith, who was killed in 1922 while widening the Cable Trail. A single prehistoric site—the Bright Angel Pueblo—is also considered a contributing element to the District because of its visibility along the North Kaibab Trail and its contribution to the visitor experience.

Although prehistoric in age, the Bright Angel Pueblo is one of the few stabilized archeological sites at Grand Canyon and its prominent location along the North Kaibab Trail makes it an important feature of the Phantom Ranch Landscape Area. Ruins of the Bright Angel Pueblo archeological site can be seen about 200 yards (180 meters) west of the Kaibab Suspension Bridge (Black Bridge) alongside the North Kaibab Trail (Photograph 21). The unit pueblo, which consists of five connected rooms with a detached kiva and one room structure, was occupied between AD 1050 and 1140 and provides clear evidence of Ancestral Puebloan presence in the central canyon corridor (Schwartz 1979).



Photograph 21. Bright Angel Pueblo, looking southwest, 2011. Source: LSD.

The Rees B. Griffith grave is also visible along the north side of the North Kaibab Trail in a rocky alcove near the Colorado River (Photograph 22). The top of the vault is stacked with native stone and river cobbles and a wooden cross is present at the east end of the grave. A bronze marker commemorating his death is attached to the cliff face to the east of the grave.

Additionally, at least one area within Phantom Ranch may have significant archeological potential and could yield information pertaining to the historical development of Phantom Ranch. This area, which is located to the north of the former Recreation Hall, was once the site of the Phantom Ranch swimming pool. In 1972, the pool was filled in by the Fred Harvey Company due to maintenance and health concerns. Many items were reportedly buried in the pool at this time including hand-carved doors from the Recreation Hall, oil-burning stoves once used to heat the guest cabins, grills, items from the old blacksmith shop, and even a piano (Anderson et al. 2010, 6).

BRIGHT ANGEL TRAIL LANDSCAPE AREA

IDENTIFIED CONTRIBUTING SITES:

Arizona State Museum (ASM) Site No.

1. AZ B:16:93 (Historic artifact scatter and mescal pit)
2. AZ B:16:132 (Historic check dams)
3. AZ B:16:134 (Historic tramway features and roasting pit)
4. AZ B:16:140 (Historic masonry structure)
5. AZ B:16:141 (Historic retaining walls)
6. AZ B:16:165 (Remnants of historic tramway system)
7. AZ B:16:252 (Historic artifact scatter)
8. AZ B:16:286 (Historic artifact scatter)
9. AZ B:16:1214 (Historic mine adits)
10. AZ B:16:1233 (Historic wall alignments)
11. AZ B:16:1235 (Historic mine adit)



Photograph 22. Rees B. Griffith grave, looking southwest, 2011. Note the bronze plaque (considered a contributing structure of the Phantom Ranch Landscape Area) mounted on the rock outcrop near the top center of the photograph. Source: LSD.

IDENTIFIED NON-CONTRIBUTING SITES:

ASM Site No.

1. AZ B:16:31 (Masonry rooms and granaries)
2. AZ B:16:35 (Habitation site)
3. AZ B:16:36 (Habitation site)
4. AZ B:16:64 (Pictographs)
5. AZ B:16:92 (Pictographs)
6. AZ B:16:109 (Masonry room and rock alignments)
7. AZ B:16:131 (Habitation site)
8. AZ B:16:152 (Masonry structure)
9. AZ B:16:157 (Habitation site)
10. AZ B:16:159 (Habitation site)
11. AZ B:16:162 (Habitation site)
12. AZ B:16:163 (Habitation site)
13. AZ B:16:164 (Habitation site and artifact scatter)
14. AZ B:16:166 (Lithic scatter)
15. AZ B:16:219 (Granaries)

16. AZ B:16:897 (Feature)
17. AZ B:16:898 (Feature)
18. AZ B:16:1202 (Masonry structure and artifact scatter)
19. AZ B:16:1203 (One-room structure)
20. AZ B:16:1215 (Alcove site with artifact scatter)
21. AZ B:16:1216 (Rock shelters and granaries)
22. AZ B:16:1217 (Wall alignment)
23. AZ B:16:1218 (Granary and artifact scatter)
24. AZ B:16:1219 (Artifact scatter)
25. AZ B:16:1221 (Habitation site and granaries)

PHANTOM RANCH LANDSCAPE AREA

IDENTIFIED CONTRIBUTING SITES:

ASM Site No.

LCS No./Structure No.

1. AZ B:16:258 (Rock alignments and historic trash)
2. AZ B:16:262 (Gauging station)
3. Bright Angel Pueblo (Prehistoric habitation;
ASM site no. unknown)
4. AZ B:16:365 (Rees B. Griffith grave)
5. Former location of Phantom Ranch swimming pool
(no ASM site number assigned)

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55624/GRIFFITH
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IDENTIFIED NON-CONTRIBUTING SITES:

ASM Site No.

1. AZ B:16:1 (Room block, granary, and possible kiva)
2. AZ B:16:2 (Masonry granary)
3. AZ B:16:68 (Two-room structure)
4. AZ B:16:257 (Rock wall and artifact scatter)
5. AZ B:16:364 (Artifact scatter)
6. AZ B:16:1201 (Petroglyphs)

NORTH KAIBAB TRAIL LANDSCAPE AREA

IDENTIFIED CONTRIBUTING SITES:

ASM Site No.

1. AZ B:16:128 (Historic rock cairn)
2. AZ B:16:414 (Transportation/communication structure)
3. AZ B:16:1237 (Historic camp and artifact scatter)
4. AZ B:16:1243 (Historic items and prehistoric artifact scatter)

IDENTIFIED NON-CONTRIBUTING SITES:

1. AZ B:16:1244 (Masonry structures and alignments, roasting pit, and midden)
2. AZ B:16:1245 (Check dams and artifact scatter)
3. AZ B:16:1246 (Small shelter and artifact scatter)
4. AZ B:16:1247 (Four granaries)

INDIAN GARDEN LANDSCAPE AREA

IDENTIFIED NON-CONTRIBUTING SITES:

ASM Site No.

1. AZ B:16:24 (Multi-room ruin and artifact scatter)
2. AZ B:16:26 (Two-room structure)
3. AZ B:16:27 (Granaries)
4. AZ B:16:103 (Multi-room pueblo and burial)
5. AZ B:16:111 (Habitation)

6. AZ B:16:112 (Habitation site and pictograph)
7. AZ B:16:113 (Mescal pit)
8. AZ B:16:133 (Habitation site)
9. AZ B:16:363 (Pueblo ruin, granaries, and pictographs)
10. AZ B:16:409 (Special use)
11. AZ B:16:410 (Special use)
12. AZ B:16:411 (Other)
13. AZ B:16:412 (Special use)
14. AZ B:16:413 (Special use)
15. AZ B:16:415 (Special use)
16. AZ B:16:416 (Habitation)
17. AZ B:16:417 (Habitation)
18. AZ B:16:418 (Habitation)
19. AZ B:16:419 (Special use)
20. AZ B:16:420 (Special use)
21. AZ B:16:421 (Undetermined)
22. AZ B:16:422 (Habitation)
23. AZ B:16:423 (Habitation)
24. AZ B:16:493 (Special use)
25. AZ B:16:511 (Special use site)
26. AZ B:16:512 (Special use site)
27. AZ B:16:1238 (Rock shelter and artifact scatter)
28. AZ B:16:1240 (Roasting features and artifact scatter)
29. AZ B:16:1241 (Rock shelter, roasting pit, and artifact scatter)
30. AZ B:16:1242 (Rock shelter and artifact scatter)

COLORADO RIVER TRAIL LANDSCAPE AREA

IDENTIFIED NON-CONTRIBUTING SITES:

ASM Site No.

1. AZ B:16:259 (Roasting pit and artifact scatter)

INDIAN GARDEN LANDSCAPE AREA

IDENTIFIED CONTRIBUTING SITES:

ASM Site No.

Information not available

IDENTIFIED NON-CONTRIBUTING SITES:

ASM Site No.

Information not available

2. BUILDINGS AND STRUCTURES:

The types of buildings and structures located within the Cross Canyon Corridor Historic District are typical of those found in other component landscapes of the Grand Canyon National Park, as well as other national parks across the nation. Beginning in 1916, the NPS sought to provide visitor facilities and other infrastructure within the nation's national parks that did not visually intrude upon the natural landscape (Tweed et al. 1977). When Grand Canyon National Park was created in 1919, the NPS had just hired its first Landscape Engineer who was tasked with designing new structures and local area plans to ensure that future NPS construction projects afforded proper sensitivity to each park's unique landscape (Tweed et al. 1977). The first NPS buildings were constructed at the Grand Canyon under the supervision of the Landscape Engineer in 1921. Also that year, renowned Fred Harvey Company architect, Mary E. J. Colter designed five buildings in the inner canyon at Phantom Ranch. Colter's

design of the ranch, which utilized local and rustic materials and harmonized well with the natural environment, set the precedent for all new construction at the Grand Canyon and became the basis for a new architectural style known as “NPS Rustic” (Tweed et al. 1977). This style became the most popular architectural form used by the NPS during the 1920s and 1930s, and nearly all of the buildings and structures identified within the Cross Canyon Corridor Historic District dating to the NPS era were designed in the Rustic style. The NPS also built retaining walls, steps, footbridges, and drainage structures along the Bright Angel Trail, South Kaibab Trail, and North Kaibab Trail out of native stone and hand-hewn logs in an effort to blend these features with the surrounding landscape.

The Rustic architectural style was further refined by the CCC and other federal relief programs, which arrived at the nation’s national parks in the 1930s to provide manual labor and assist the NPS with park development. When the CCC arrived at the Grand Canyon in 1933, they initiated numerous improvement and construction projects on the South Rim and within the Grand Canyon’s central corridor. Within the Cross Canyon Corridor Historic District specifically, the CCC built the Colorado River Trail; performed rerouting and gradient adjustments to the Bright Angel Trail, South Kaibab Trail, and North Kaibab Trail; added and replaced numerous support structures along the trails including trail shelters, bridges, exhibits, and retaining walls; and rehabilitated existing buildings at Phantom Ranch and the mouth of Bright Angel Creek. All of these structures incorporated rustic design aesthetics and utilized natural materials such as stone and wood in their construction. The CCC also installed a telephone line between the South Rim and Roaring Springs that facilitated communication between the inner canyon and the North and South Rims. Today, vestiges of the Trans-canyon Telephone Line are present within each of the ten landscape areas of the District, and many of the CCC-era buildings and structure remain intact and in good condition.

Buildings and structures added to the District after the CCC left the Park in 1942 include restrooms and maintenance and utility buildings. Additionally, many of the retaining walls, steps, and drainage features along the South Kaibab Trail, North Kaibab Trail, Colorado River Trail, and Bright Angel Trail, require constant maintenance and repairs due to the harsh environment of the canyon and heavy visitor and pack animal traffic. As such, many of the original trail features have been removed and replaced or reconstructed, and new features have been added as geologic and other environmental forces alter and shift the course of the trails over time.

Other structures, such as the Trans-canyon Water System, were installed at the Grand Canyon as part of the Mission 66 program, which was initiated by the NPS between 1956 and 1966 to improve deteriorating infrastructure and tourist facilities within the nation’s national parks (Allaback 2000). While the modern era buildings and structures were also designed to mimic the Rustic-style buildings of the 1920s and 1930s, Mission 66 buildings were predominantly utilitarian in function and lacked elaborate ornamentation and other decorative details. As such, the majority of the post 1942 buildings consist of simple wood frame structures with concrete foundations, board and batten siding, and asphalt-shingled roofs. Stone work is applied only minimally to the structures, and is generally decorative rather than functional. Due to their partial adherence to Rustic design principles, the majority of the buildings are considered non-contributing/compatible features of the Cross Canyon Corridor Historic District.

The following section provides a more detailed discussion of the buildings and structures located within each of the ten Landscape Areas of the Cross Canyon Corridor Historic District. A list of contributing, non-contributing, and non-contributing/compatible buildings and structures follows each discussion.

BRIGHT ANGEL TRAIL LANDSCAPE AREA

Buildings and structures located within the Bright Angel Trail Landscape Area include the native stone and wood frame rest houses built at the 1.5- and 3-mile mark of the trail, at Indian Garden, and at the mouth of Pipe Creek near the Colorado River (Photograph 23 and Photograph 24). All of these rest houses were built between 1929 and 1939 by the CCC and still retain the NPS vernacular architecture of that period. Each of the rest houses includes entry steps and built-in seating ledges constructed of the same native stone and mortar as their respective rest house. The color and type of stone used for each rest house varies according to the geological stratum it is located in, thereby reflecting the effective use of site-specific materials and a piece of the formational timeline of the Grand Canyon.

In addition to the rest houses, the rest area locations at the 1.5- and 3-mile mark of the Bright Angel Trail and at Indian Garden include modern waterless restroom facilities built with rustic wood siding, wooden or log chain handrails, and native stone steps where needed (Photograph 25). These facilities were built during or after the 1980s and provide a convenience for many visitors.



Photograph 23. Pipe Creek Rest House (commonly referred to as the River Rest House) near the Colorado River, looking northwest, 2009. Source: LSD.



Photograph 24. Three Mile Rest House, looking north, 2009. Source: LSD.



Photograph 25. Non-contributing/compatible restroom building at the Mile-and-a-Half rest area, looking north, 2009. Source: LSD.

Other structures located within the Bright Angel Corridor Landscape Area include numerous retaining walls, the tubular steel poles of the Trans-canyon Telephone Line, and native stone support piers and pipeline associated with the Trans-canyon Water System. Many of the retaining walls that shore-up steep slopes adjacent to the trail were built by the CCC during the 1930s and remain intact today. The walls are constructed of site-specific stone that was dry-stacked or mortared in place. Additional retaining walls have been built since the 1930s using similar construction methods. Similar to the other CCC-constructed structures, these walls are also reflective of NPS Rustic architectural style and blend in with the surrounding landscape of the trail.

The Trans-canyon Telephone Line was initially installed in 1935 and its poles were upgraded to add a second arm between 1938 and 1939 (Photograph 26). The telephone line is visible along the length of the trail, and several of the poles are in close proximity to its alignment. The telephone poles are constructed of steel and have blue or clear glass insulators which are indicative of materials used during the period in which it was constructed.



Photograph 26. Steel pole of the CCC-constructed Trans-canyon Telephone Line, ca. 1935, looking west, 2009. Source: LSD.

The portion of the Trans-canyon Water System visible at several locations along the Bright Angel Trail and its creek crossings was constructed by the SFRR between 1931 and 1932. The pipeline initially measured 6 inches in diameter and was part of a system that supplied water from the South Rim to Indian Garden. In 1965, the water line was integrated into the Trans-canyon Water System, which carried water from Roaring Springs to the South Rim through the Indian Garden water pumping system (JLR 2005, 107). In 1985, the water line was routed west of the Yavapai Museum on the North Rim of the canyon and upgraded to an 8-inch-diameter steel pipe. The pipeline crosses the Bright Angel Trail in numerous locations and is supported on native stone and mortar piers at creek crossings (Photograph 27). In addition, remnants of rusted iron I-beams located adjacent to the trail may be linked to the cable tramway that was built in 1931 to transport labor and materials to construct the water system. Two vertical I-beams are visible on the eastern side of the trail near Indian Garden (Photograph 28). The vertical orientation of these beams suggests that they may have been associated with the supports for the tramway's cable.

No buildings or structures dating to the Cameron-era (1890–1918) remain within the Bright Angel Trail Landscape Area. Although some segments of the original “Cameron’s Trail” (1890–1927) are still visible from the South Rim and through aerial photography, all of these segments are located outside the CLI boundary.



Photograph 27. Support pier of the original SPRR Trans-canyon Water System, looking northeast, 2009. Source: LSD.



Photograph 28. Rusted iron I-beam that may be associated with the cable tramway built by the SFRR during construction of the South Rim water system, looking northeast, 2009. Source: LSD.

CONTRIBUTING FEATURES:

Structure Name	LCS No./Structure No.
1. Bright Angel Trail	9455/TBA020
2. Mile-and-a-Half Rest House	9446/BCB0141
3. Three Mile Rest House	9447/BCB0142
4. Indian Garden Rest House	9448/BCB0143
5. River Rest House	55543/BCB179
6. Stone steps at the rest houses	—
7. Retaining walls	—
8. Trans-canyon Telephone Line	55623/PHONE
9. Cable tramway remnants	—
10. Masonry support piers of the original SPRR Trans-canyon Water System	—

NON-CONTRIBUTING, COMPATIBLE FEATURES:

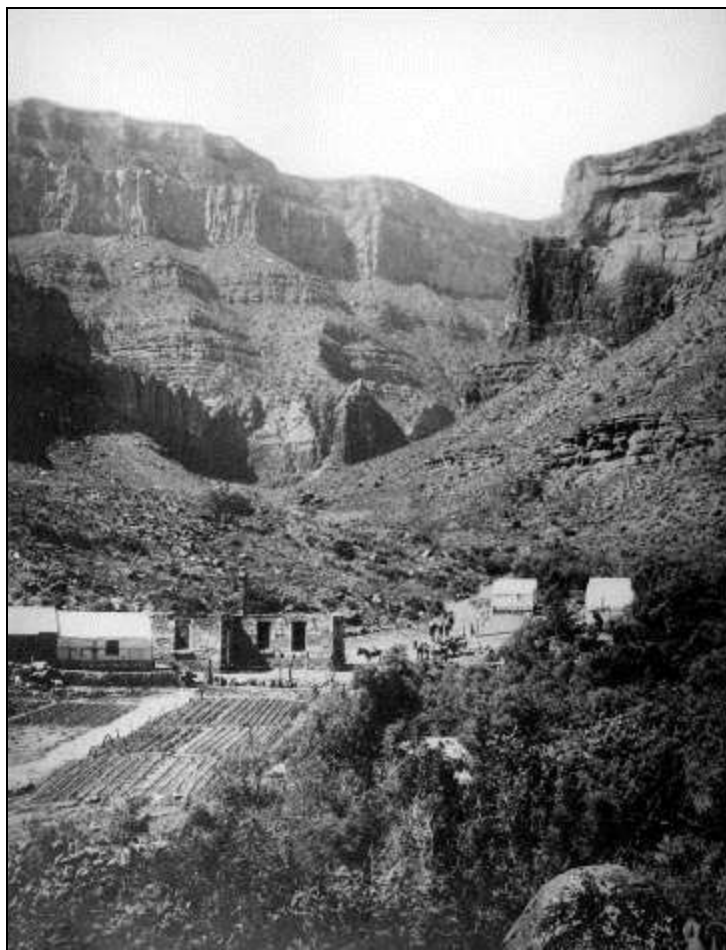
Structure Name
1. Mile-and-a-Half restroom building
2. Three Mile restroom building
3. Indian Garden restroom building
4. Retaining walls (post 1942)

INDIAN GARDEN LANDSCAPE AREA

No buildings and structures, and only a few ruins, remain from the period of significance associated with the Cameron era (1903–1927) This lack of buildings can be attributed to the thorough job undertaken by the NPS in 1927 of removing all Cameron-related buildings and structures. At one time Cameron’s Indian Garden camp included a mule corral and shed, incinerator, tents, a tool shed, a laundry tent, toilets, a root cellar, Cameron’s stone house, a

kitchen, and several lengths of stone wall (Photograph 29). The only observable building-related remnants are stone platform foundations of a trailkeeper's tent, a compilation of rocks that served either as a toilet or food cooler, and a pile of debris located in an area once used as the Kolb Brother's studio. Certain piles of stone and debris dispersed throughout Indian Garden may also be remnants of the Cameron era, but would require further research to identify them as such.

In contrast, many of the major buildings and structures from the NPS and CCC-eras (1927–1942) remain intact and continue to retain their integrity of design, materials, and workmanship. These features, built by either the NPS, SFRR, or the CCC on behalf of the NPS, include the 1932 Trail Caretaker's Residence (now known as the SAR Cache) (#9442) and terrace with its associated stone steps and retaining wall; the 1932 South Pumphouse (#55389); the 1932 Reservoir (or sedimentation tank); the 1932 Rehandling Pumphouse (#55390); the 1936 Pump Caretaker's Residence (now known as the Rock House) (#9440); the 1936 Trailside Shelter and steps (also known as the Indian Garden Resthouse) (#9948) (Photograph 30); the Trans-canyon Telephone Line (#55623); portions of the Garden Creek rip-rap channelization; and the concrete cistern and valve box above the Reservoir. The Rock House, which burned in 1942, was rebuilt in 1943. Nearly all of these buildings and structures were built in the NPS Rustic-architectural style and feature exterior wood framing and plank siding, shingled and gabled roofs with exaggerated eaves, and native stone corner piers.



Photograph 29. Buildings at Cameron's Indian Garden, ca. 1906 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).



Photograph 30. Trail shelter at Indian Garden, ca. 1936 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

Between 1960 and 1965, many of the original buildings and structures within the Day Use Area of Indian Garden were relocated or razed and replaced with modern facilities. In the late summer of 1963, a flash flood destroyed a number of facilities at Indian Garden, including the Rehandling Pumphouse (#55390), the channel and banks of Garden Creek, and utility lines, all of which were rebuilt or repaired by 1965 (JMA 2005, II-106). Additionally, an old tool shed was razed to make room for a new bunkhouse, which was built to the north of the Rock House in 1965 (JMA 2005, II-106). Other buildings and structures within the Day Use Area that post date the period of significance include the gabion walls south of the Trail Caretaker's Residence; a wood frame Air Quality Monitoring Station situated approximately 50 feet southwest of the Rock House; and a remnant concrete abutment from a former crossing at Garden Creek (JMA 2005, III-53). The gabion walls were likely built in the 1960s; the precise construction date for both of Air Quality Monitoring Station and the abutment are unknown.

Other buildings and structures razed during the latter half of the period of significance include stone-lined ditches that were part of the 1930s erosion control or sewage-handling system, latrines once located north of the Caretaker's Residence, stone walls around the former Picnic Area, and mule barn and corral.

Beginning in the 1980s, the NPS initiated a series of construction and demolition projects which radically changed the built environment within Indian Garden. During this time, a second bunkhouse was built west of the Rock House in 1986. Three years later, the NPS built a new Administration Area to the west of the Bright Angel Trail (JMA 2005, II-123). The area consisted of five new facilities—a combined storage/laundry/first aid building, a ranger residence, a residence for the pump operator, and a new mule barn and corral—as well as a bunkhouse, which was moved from its former location west of the Rock House in 1989. Other structures, including a helispot, sand filter beds, and drain field were also built in the Administration Area as part of the 1989 rehabilitation. Additionally, the 1970s mule barn and

corral, which replaced the 1930s mule barn and corral, was relocated in 1989. All of these renovations were based on recommendations presented in a floodplain study and Development Concept Plan, completed by the NPS in 1979 (JMA 2005, II-123). Other buildings and structures added to the Administration Area after 1989 include a trash compactor shed, horseshoe courts, and a hose house.

Following the completion of the Administration Area, a new campground was built just north of the new ranger residence. The new campground had two comfort stations and 16 camping sites, each of which contained its own shade structure, picnic table, and pack rack (JMA 2005, II-124). The entire area was encircled with a stone wall, and numerous stone walls were built between the camp sites. An area containing an information kiosk, water fountain, and numerous benches was also created near the center of the campground (JMA 2005, II-124). Additionally, at the north end of Indian Garden, a new mule barn and corral containing a tack room, feed storage area, and open shelter was built and a rest area with an information kiosk was established between the barn and composting toilets (JMA 2005, II-124).

Although difficult to ascertain without earth-disturbing excavations, it is likely that many of the underground utility lines from the period of significance are still present, although in an unused state. These utilities likely include underground sewage treatment facilities, such as sludge trenches and drain fields, underground electric lines, and underground water pipelines.

CONTRIBUTING FEATURES:

DAY USE AREA

Structure Name	LCS No./Structure No.
1. Trail Caretaker's Residence (now known as the SAR cache)	9442/IGB0093
2. Channelized Garden Creek	—
3. Stone retaining wall at terrace	—
4. Stone steps to terrace	—
5. Pump Caretaker's Residence (now known as the Rock House)	9440/IGB0018
6. Trans-canyon Telephone Line	55623/PHONE

PUMP STATION AND CORRAL AREA

Structure Name	LCS No./Structure No.
1. South Pumphouse	55389/IGB0031
2. Reservoir (sedimentation tank)	57159/IGB0032
3. Concrete cistern	—
4. Trailside Shelter	9948/BCB0143
5. Stone steps at the Trailside Shelter	

NORTH INDIAN GARDEN AREA

Structure Name	LCS No./Structure No.
1. Indian Gardens Rehandling Pumphouse	55390/IGB0020

NON-CONTRIBUTING, COMPATIBLE FEATURES:

ADMINISTRATION AREA

Structure Name	LCS No./Structure No.
1. NPS Ranger Residence	None/1460
2. Pump Operator's Residence	None/1459
3. Storage/Laundry/First Aid Building	None/1429
4. Helispot	—
5. Wooden stairs	—
6. Stone walls and retaining walls	—

CAMPGROUND AREA

Structure Name

1. Information kiosk
2. Stone walls
3. Stone camp site retaining walls

PUMP STATION AND CORRAL AREA

Structure Name

1. North Pumphouse
2. Mule Barn and Corral
3. Information kiosk
4. Stone retaining wall
5. Stone-edged steps

LCS No./Structure No.

None/484
 None/1461
 —
 —
 —

NORTH INDIAN GARDEN AREA

1. Flood walls

NON-CONTRIBUTING FEATURES:

ADMINISTRATION AREA

Structure Name

1. Trash Compactor Shed
2. Sand filter bed
3. Horseshoes court
4. Hose House
5. Drainfield

LCS No./Structure No.

None/1501
 —
 —
 —
 —

CAMPGROUND AREA

Structure Name

1. Comfort station—south
2. Comfort station—north
3. Shade structures

LCS No./Structure No.

None/1413
 None/1440
 None/1463–1480

DAY USE AREA

Structure Name

1. Air Quality Monitoring Station
2. Gabion Walls
3. Footbridge abutment

PUMP STATION AND CORRAL AREA

Structure Name

1. Comfort Station
2. Electrical substation

LCS No./Structure No.

None/1439
 —

UNDETERMINED FEATURES:

DAY USE AREA

Structure Name

1. Concrete foundation
2. Utility pole

PUMP STATION AND CORRAL AREA

Structure Name

1. Leveled terraces

COLORADO RIVER TRAIL LANDSCAPE AREA

The Colorado River Trail (#9456) was built by the CCC between 1933 and 1936 for the sole purpose of connecting the Bright Angel Trail to the South Kaibab Trail. Dubbed by CCC enrollee Louis Purvis as the “most hazardous of any of trail that had been built [by the CCC] at the park,” the trail was cut out of the schist and granite cliffs of the Colorado River using air compressors, jackhammers, and 40,000 pounds of blasting powder (Audretsch 2011, 31). Construction of the trail was completed in four phases, with the most difficult section of the trail represented by a 0.5 mile section in the vicinity of Pipe Creek—built between January and June 1935. Completion of the trail in January 1936 effectively marks the completion of all backcountry trail-building at GRCA.

The Pipe Creek restroom, located approximately 245 feet south of the Colorado River at its intersection with the Bright Angel Trail, is the only building located within the Colorado River Trail Landscape Area. The building, which was constructed by the NPS sometime after 2003, is similar in construction to other restrooms in the park, including those along the Bright Angel and South Kaibab Trails. The restroom consists of a wood frame building that is elevated above the surrounding terrain on a raised concrete foundation (Photograph 31). The building has a front-gabled roof that forms a small porch on its main elevation, or eastern façade. The roof is covered with asphalt shingles and the exterior of the building is sheathed with rustic wooden siding. Because the building adheres to NPS Rustic architectural principles, it is considered a non-contributing/compatible feature of the Colorado River Trail Landscape Area.

Structures located within the Colorado River Trail Landscape Area include the Silver Bridge and the Trans-canyon Water System, as well as the trail itself and the native stone retaining walls and intermittent sections of stone edging which delineate it. The Silver Bridge is located at the western terminus of the Colorado River Trail and provides a crossing of the river for hikers. Built in 1966 as part of the Trans-canyon Water System, the cable-span bridge is constructed of galvanized steel and has concrete abutments (Photograph 32). The bridge is



Photograph 31. Pipe Creek restroom building, looking north, 2009. The Colorado River Trail is visible to the right of the building. Note the stone edging along the left edge of the trail. Source: LSD.



Photograph 32. Silver Bridge, showing cables and steel decking, built in 1966 as part of the Trans-canyon Water System, looking northeast, 2009. Source: LSD.

not wide enough to accommodate pack animals; therefore, mule trains traveling from the South Rim to Phantom Ranch and the North Rim must use the Kaibab Suspension Bridge (also known as the Black Bridge) which is located further upstream on the South Kaibab Trail. The Silver Bridge is a contrasting feature in the overall landscape that is discordant to the natural Colorado River setting, and is therefore considered a non-contributing feature of the Colorado River Trail Landscape Area.

Vestiges of the Trans-canyon Water System are present in numerous locations along the length of the Colorado River Trail. The pipeline is most evident at the terminus of the trail, where it crosses the Colorado River beneath the deck of the Silver Bridge. In other locations, inlets for buried segments of water system's pipeline are visible both within and adjacent to the trail corridor. The water system is considered a non-contributing feature of the Colorado River Trail Landscape Area as it was constructed outside the District's period of significance.

The retaining walls that line the edges of the Colorado River Trail consist predominantly of 4- to 5-courses of dry-laid, locally sourced stone. The majority of the walls are present in the sand dune area on the downslope side of the trail and serve to prevent undercutting and erosion (Photograph 33). Although the stone retaining walls blend with the surrounding landscape and are similar in construction to other stone features constructed by the CCC, the expedient nature of their construction suggests that these structures likely post-date the original construction of the Colorado River Trail and are considered non-contributing/compatible features of the Colorado River Trail Landscape Area.



Photograph 33. Stacked stone retaining wall along the Colorado River Trail, looking southwest, 2009. Source: LSD.

No contributing buildings or structures dating to the period of significance are present within the Colorado River Trail Landscape Area.

CONTRIBUTING FEATURES:

Structure Name

1. Colorado River Trail

LCS No./Structure No.

9456/TRL003

NON-CONTRIBUTING, COMPATIBLE FEATURES:

Structure Name

1. Pipe Creek restroom building
2. Native stone retaining walls (post 1942)
3. Native stone steps (post 1942)
4. Post 1966 section of the Trans-canyon Water System

NON-CONTRIBUTING FEATURES:

Structure Name

1. Silver Bridge (ca. 1966)

PHANTOM RANCH LANDSCAPE AREA

Of the ten landscape areas that comprise the Cross Canyon Corridor Historic District, the Phantom Ranch Landscape Area contains the most buildings and structures. Of the 55 buildings and structures currently present within the Phantom Ranch Landscape Area, 36 of these date to the period of significance and are considered to be contributing features of the Cross Canyon Corridor Historic District. Nearly all of these buildings remain in good condition and have been minimally altered.

CONCESSION AREA

The earliest buildings at Phantom Ranch were designed by celebrated Fred Harvey Company architect, Mary E. J. Colter. Phantom Ranch's original buildings consisted of a dining hall (#55575), (Photograph 34), three guest cabins (#55571, 55572, and 55574) (Photograph 35), and a manager's cabin (#55566) (Photograph 36), all of which were built by the Fred Harvey Company and the SFRR in 1922 to accommodate mule riders. These buildings, which remain the focal point of the ranch today, consist of one-story stone and wood frame buildings built in the Craftsman Bungalow architectural style. Although unique in their design, each building has overhanging eaves, exposed rafters with knee braces, decorative purlins, chevron-patterned board and batten gable ends, and multiple-light casement windows. Additionally, the foundations, exterior walls, chimneys, and corner piers of the buildings are constructed of large boulders, rounded river cobbles, and angular rocks that were gathered locally and display a wide variety of texture and color due to the many different geological formations of the canyon from which they eroded. With the exception of the dining hall, which has been modified numerous times since 1928, all of the Colter-designed buildings remain much as they did during the period of significance and continue to retain their organic appearance and connection to the natural setting of the inner canyon. Historic maps and photographs suggest that other structures, including a wooden information kiosk, a concrete reservoir (#55578), and numerous stone retaining walls, were also constructed in association with the initial development of the ranch. Although not designed by Colter, many of the original retaining walls and the concrete reservoir remain at the ranch today and are considered contributing structures. The information kiosk, which was originally located to the southeast of the dining hall, has since been removed and is no longer present within the landscape area (Photograph 37).



Photograph 34. Phantom Ranch Dining Hall, showing the southern and western elevations, looking northeast, 2011. Source: LSD.



Photograph 35. Guest Cabin No. 8, showing the southern and western elevations, looking northeast, 2011. Source: LSD.



Photograph 36. Northern elevation of the Manager's Cabin, looking south, 2011. Source: LSD.



Photograph 37. Promotional photograph showing the dining hall and wooden information kiosk (at right), date unknown (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

Between 1926 and 1930, the Fred Harvey Company and NPS expanded their facilities at Phantom Ranch to include eight new guest cabins (#55563–55565, 55568–55570, and 55573), two toilets located on the bank of Bright Angel Creek, a combined coal and wash house (#55562), a recreation hall (#55561), a wooden bathhouse with dressing rooms to the rear of the guest cabins (#665450), a guide cabin (#55560), a dude corral (#55621), a cowboy dorm (#55560), and a hay shed. With the exception of the toilets and the hay shed, all of these buildings still exist at the ranch today. Although no signed drawings or plans for these structures exist, Colter was still employed as the principal designer for the SFRR during the span of time in which they were built and it is probable that she also assisted in the design of these later additions to the ranch (Cleeland 1985, 67). Additionally, all of the building designs bear her characteristic style and are nearly identical in plan and appearance to her earlier structures. Although not as aesthetically pleasing as the original ranch buildings, all of the buildings are sheathed with board and batten siding and have walls, foundations, and corner piers constructed of native stone and rounded river cobbles (Photograph 38). Unlike the original buildings, which have a front-gabled entrance and overhanging eaves, the later guest cabins have a moderately pitched side-gabled roof with a low pitched gablet on the front elevation.

Also during this time, Rust's cable trail was rebuilt by the NPS to provide access to the Colorado River from the North Rim. The completed trail, which later became known as the North Kaibab Trail (#9454), ran east-west through the center of the Phantom Ranch and functioned as the area's main pathway. Ancillary dirt footpaths, many of which extended from and connected to the North Kaibab Trail, were constructed to link the new construction to the old and numerous stone retaining walls were constructed. Nearly all of these footpaths and walls, as well as the alignment of the North Kaibab Trail, remain in their original location today.



Photograph 38. East elevation of Guest Cabin No. 2 (ca. 1928), 2011. Source: LSD.

Other contributing structures identified within the Phantom Ranch concession area include an outdoor fireplace (#57213) and vestiges of the NRHP-listed Trans-canyon Telephone Line (#555623). The outdoor fireplace is located to the west of the Dining Hall and consists of a beehive-shaped structure that is constructed of stone and concrete. Although its age is unknown, the style and condition of the fireplace suggest it is contemporaneous with the other historic buildings at the ranch. Tubular steel poles of the Trans-canyon Telephone Line are also visible at numerous locations within the boundaries of the ranch. The line, which is predominantly spans the western canyon wall, was erected by the CCC in March 1935 to replace an existing single-circuit system installed by the NPS to service the South Rim and Phantom Ranch in 1922 (Cleeland 1986).

Non-contributing and non-contributing/compatible buildings and structures at the ranch include those that were built after 1942. Non-contributing structures include an antenna shed and associated microwave satellite dish, a gauging station and dug-out storage shelter on the east bank of Bright Angel Creek, and a temporary shade structure to the northwest of the Phantom Ranch Welcome Corral (#55621). All of these structures are of recent construction and are related to visitor comfort and NPS administrative functions at the ranch.

Buildings and structures that are considered non-contributing/compatible to Phantom Ranch consist of the Phantom Ranch Ranger Station, the Fred Harvey Mule Barn, four hiker dorms, a laundry building, and an amphitheater, and a CCC Trans-canyon Telephone Plaque (#57227). With the exception of the laundry building, which is situated to the northwest of the dining hall, all of the buildings are located in two areas to the north and south of the main ranch development. The four hiker dorms are situated to the northeast of Guest Cabin No. 11 and consist of one-story wood frame buildings built on concrete foundations. The Ranger Station, Mule Barn, amphitheater, and plaque are located to the south of the ranch. The earliest of these structures, the Fred Harvey Mule Barn, was built in the area in 1964. The barn consists of a wood frame and stone structure with an adjoining corral (Photograph 39). The ranger



Photograph 39. Fred Harvey Mule Barn (ca. 1964), looking east, 2011. Source: LSD.

residence is located to the north of the barn and consists of a side-gabled wood frame building with a concrete foundation. All of these facilities are considered non-contributing/compatible features of the Phantom Ranch Landscape Area due to their construction methods and adherence to Rustic style architectural principles.

Additionally, at least one notable historic structure—an irregularly-shaped swimming pool originally located in a boulder-filled floodplain to the north of the Recreation Hall (see Photograph 17)—is no longer present at Phantom Ranch. The pool was constructed by a crew of 20 CCC enrollees between 1934 and 1936. The finished pool measured approximately 35 feet by 70 feet in size and was fed by water from Bright Angel Creek (Cleeland 1986, 47; Anderson 1998; Kuehl 1934; Langley 1934a). It was a centerpiece of Phantom Ranch until 1972, when it was filled in by the Fred Harvey Company due to maintenance and health concerns. Other missing structures dating to the District's period of significance include the toilet facilities, originally constructed by the SFRR on the bank of Bright Angel Creek in 1925, and a wooden information kiosk, visible in a historic photograph showing Colter's initial development at the ranch (see Photograph 37). The toilet facilities were razed in 1936 when the SFRR constructed the ranch's first sewer system (Cleeland 1986b, 47); it is not known when the information kiosk was removed.

BRIGHT ANGEL CREEK DELTA

Colter's design for Phantom Ranch set the precedence for other architecture in the inner canyon, including the buildings and structures developed by the USGS on the Bright Angel Creek delta immediately south of Phantom Ranch. The first government structure built by the USGS on the Bright Angel Creek delta was the USGS Residence (#55557) (also known as the STP Operator's Cabin and the USGS Laboratory). Built in 1922 in association with a gauging station and recorder tower on the northern bank of the Colorado River, the building was modeled after Colter's Manager's Cabin and had full rock walls and wooden gables (Cleeland 1985, 67). Between 1928 and 1942, other contributing buildings were added to the Bright Angel Delta by the NPS, USGS, and CCC including a caretaker's cabin (#55437) (later

designated the Rock House), a Packer's Cabin (#55420), a Mule Shelter and Corral (#9451), and a storehouse/laboratory (#55558). The Rock House and storage facility were similar in appearance to the 1928 guest cabins at Phantom Ranch and were constructed almost entirely of wood; only their foundations and corner piers were constructed of stone (Photograph 40). The Packer's Cabin and Mule Shelter (Photograph 41) were built by the CCC following standard plans created by the NPS in the 1930s. Similar to other Rustic-style buildings, these facilities also utilized stone and wood in their construction and were designed to harmonize with the canyon's natural setting. This design aesthetic continued after 1942, when all CCC construction at Grand Canyon ceased. Non-contributing/compatible buildings and structures present on the Bright Angel Creek delta today, including the sewage treatment plant (Photograph 42), restroom building, SAR cache, trash compacting building, and a helibase ramada, continue to reflect these earlier Rustic-style design principles, and nearly all of these properties have board and batten or wood plank walls and stone corner piers.

Other contributing structures identified within the Bright Angel Creek delta include the Rees B. Griffith grave (#555624) and memorial plaque (#57228), the North Kaibab Trail (#9454), four pyramidal-shaped stone pylons that once supported the ranch's sewer system (#57212), and the abutments of the Rock House Bridge (#55622). The Rees B. Griffith grave is visible along the north side of the North Kaibab Trail in a rocky alcove near the Colorado River (see Photograph 22). The top of the vault is stacked with native stone and river cobbles and a wooden cross is present at the east end of the grave. A bronze marker commemorating his death is attached to the cliff face to the east of the grave. The sewer pylons, which are predominantly visible along the northern bank of the Colorado River to the south of the Mule Shelter, were erected by the SFRR in 1929 (Cleeland 1986, 47). The Rock House Bridge and its associated abutments were originally constructed by the CCC in March 1935. The bridge was destroyed in 1957 and was subsequently replaced with the current steel structure in 1965 (Anderson et al. 2010, 5; Carrel 1940; Cleeland 1986b, 58; Kuehl 1936).



Photograph 40. Eastern elevation of the Rock House on the Bright Angel Creek delta, looking west, 2011. Source: LSD.



Photograph 41. The CCC Mule Shelter and Corral constructed by the CCC in the Bright Angel Creek delta, ca. 1935 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).



Photograph 42. Northern elevation of the Sewage Treatment Plant on the Bright Angel Creek delta, looking south, 2011. Source: LSD.

CONTRIBUTING FEATURES:

PHANTOM RANCH

Structure Name	LCS No./Structure No.
1. North Kaibab Trail	9454/TRAIL4
2. Phantom Ranch Cabin #01	55567/884
3. Phantom Ranch Cabin #02	55565/882
4. Phantom Ranch Cabin #03	55564/881
5. Phantom Ranch Cabin #04	55563/880
6. Phantom Ranch Cabin #05	55568/885
7. Phantom Ranch Cabin #06	55569/886
8. Phantom Ranch Cabin #07	55570-887
9. Phantom Ranch Cabin #08	55574/891
10. Phantom Ranch Cabin #09	55571/888
11. Phantom Ranch Cabin #10	55572/889
12. Phantom Ranch Cabin #11	55573/890
13. Phantom Ranch Comfort Station	55562/879
14. Phantom Ranch Delco Light Station	55556/868
15. Phantom Ranch Dining Hall	55575/892
16. Phantom Ranch Guides Dormitory	55560/PRQ875
17. Phantom Ranch Manager's Cabin	55566/883
18. Phantom Ranch Outdoor Fireplace	57213/PHANTOM2
19. Phantom Ranch Recreation Hall	55561/878
20. Phantom Ranch Reservoir	55578/898
21. Phantom Ranch Washhouse	55576/894
22. Phantom Ranch Welcome Corral	55621/PHANTOM5
23. Phantom Ranch Bathhouse	665450/895
24. Trans-canyon Telephone Line	55623/PHONE
25. Stone retaining walls	—
26. Footpaths connecting the North Kaibab Trail and guest facilities	—

BRIGHT ANGEL CREEK DELTA

Structure Name	LCS No./Structure No.
1. Phantom Ranch Rock House	555437/PRQ154
2. Phantom Ranch Rock House Bridge Abutments	55622/PHANTOM3
3. Phantom Ranch Sewer Line Stone Pylons	57212/PHANTOM1
4. Phantom Ranch USGS Storehouse/Laboratory	55558/PRB871
5. Phantom Ranch Mule Shelter, Storage and Corral	9451/PRB222
6. River Ranger Station	55420/PRQ91
7. Phantom Ranch USGS Laboratory	55557/PRQ869
8. USGS Gauging Station	—
9. Rees B. Griffith Grave	55624/GRIFFITH
10. North Kaibab Trail	9454/TRAIL4

NON-CONTRIBUTING, COMPATIBLE FEATURES:

PHANTOM RANCH

Structure Name	LCS No./Structure No.
1. Phantom Ranch Ranger Station	None/440
2. Bridge to Bright Angel Campground	—
3. Fred Harvey Mule Barn	None/872
4. Hiker Dorm #012	None/899
5. Hiker Dorm #013	None/900
6. Hiker Dorm #014	None/901

7. Hiker Dorm #015	None/902
8. Laundry building	—
9. Phantom Ranch amphitheater	—
10. CCC Trans-canyon Telephone Plaque	57227/PLAQUE12

BRIGHT ANGEL CREEK DELTA

Structure Name	LCS No./Structure No.
1. Sewage Treatment Plant (1981)	None/491
2. Restrooms (1981)	None/490
3. Search and Rescue Cache Shed (date unknown)	—
4. Trash Compacting building (date unknown)	—
5. Helibase Ramada (date unknown)	—
6. Shed to the south of Sewage Treatment Plant (date unknown)	—
7. Information kiosk to the east of Rock House Bridge (date unknown)	—

NON-CONTRIBUTING FEATURES:

PHANTOM RANCH

Structure Name

1. Antenna shed (date unknown)
2. Microwave satellite dish adjacent to the Antenna Shed (date unknown)
3. Dugout storage shelter adjacent to Bright Angel Creek (date unknown)
4. Gauging station near Bright Angel Creek (date unknown)
5. Shade structure to the northwest of the Phantom Ranch Welcome Corral (date unknown)

MISSING FEATURES:

PHANTOM RANCH

Structure Name

1. Information kiosk to the southeast of the Phantom Ranch Dining Hall (ca. 1922)
2. Toilet facilities located along the banks of Bright Angel Creek (ca. 1922)
3. Phantom Ranch swimming pool (ca. 1934–1936)

SOUTH KAIBAB TRAIL LANDSCAPE AREA

The 6.4-mile-long South Kaibab Trail (#9453) was formally constructed by the NPS between 1924 and 1925; prior to this date, only a portion of the trail stretching from the Tip-off to the Colorado River was informally developed and maintained by Utah entrepreneur David Rust in association with his tourist camp (now Phantom Ranch) and cable car system. Completion of the trail helped to consolidate and accommodate tourist activities in the inner canyon and maximized the NPS's regularly control over inner canyon resources and visitation. Following the completion of its companion trail, the North Kaibab Trail in 1928, the South Kaibab Trail formed the southern link in the canyon's first (and only) NPS-constructed Trans-canyon travel route.

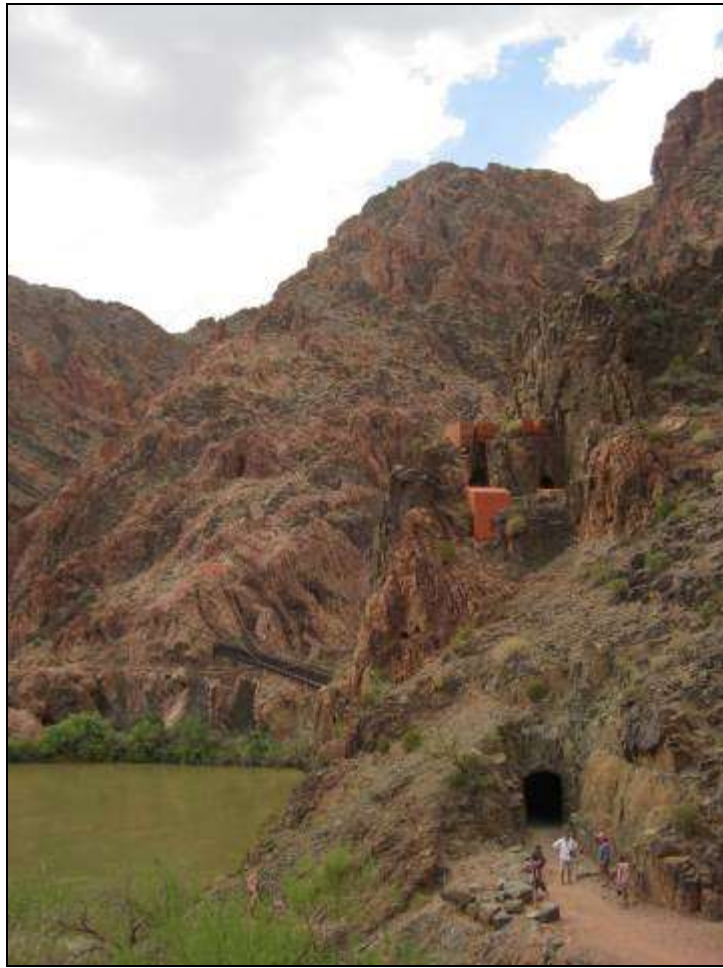
The South Kaibab Trail Landscape Area retains a number of historic buildings and structures, including the Fossil Fern Exhibit at Cedar Ridge (#9450), the Kaibab Suspension Bridge (#9452) (also known as the Black Bridge) and the tunnel at its southern approach, the tubular steel poles of the Trans-canyon Telephone Line (#55623), and numerous masonry features such as steps, retaining walls, and water bars. All of these features were constructed by the NPS and CCC between 1924 and 1939.

The earliest contributing structure of the South Kaibab Trail Landscape Area is the Kaibab Suspension Bridge (Black Bridge), which was constructed over the Colorado River by the NPS in 1928 (Photograph 43; see Photograph 9). The bridge was constructed to replace a 1921 “swinging” suspension bridge that was deemed unsuitable for passage following the completion of the South Kaibab Trail (see Photograph 5) (Webber 1929; Karpinski 1986; Skerrett and Tillotson 1926). To accommodate the increasing number of tourists utilizing the new trail, NPS engineers designed a more rigid structure for the new location, consisting of a 500-foot-long by 5-foot-wide steel truss suspension bridge with steel plate floors overlaid with asphaltic concrete. To access the new bridge from the south, NPS work crews blasted a 105-foot-long by 10-foot-high by 6-foot-wide unnamed tunnel through the granite walls of the canyon (Photograph 44). Both the bridge and the tunnel remain an integral part of the South Kaibab Trail today, and continue to provide a crossing for hikers and pack animals traveling along the trail between the South Rim and Phantom Ranch. With the exception of repainting and other necessary repairs, neither the bridge nor the tunnel has been modified since their original construction.

Drainage and circulation features present along the entire length the trail, including stone risers, retaining walls, cobblestone pavement, and water bars are also considered contributing structures of the South Kaibab Trail Landscape Area (Photograph 45 and Photograph 46). Many of the retaining walls that shore-up switchbacks and steep slopes adjacent to the trail built by the NPS and the CCC during the 1930s remain intact today. The walls are constructed of variable courses of native stone that were dry-stacked or mortared in place. Additionally, the tubular steel poles of the Trans-canyon Telephone Line, visible in the vicinity of the Tip-off and along the northern half of the trail, also serve as a reminder of the CCC’s contribution to the development of the canyon’s central corridor. Other features of the trail, such as its raised log steps and water bars and stone steps and retaining walls, have been built since the 1930s (Photograph 47). Similar to the other structures built by the CCC and NPS, these features blend in with the surrounding natural landscape of the trail and



Photograph 43. Kaibab Suspension Bridge, looking southeast, 2011. Source: LSD.



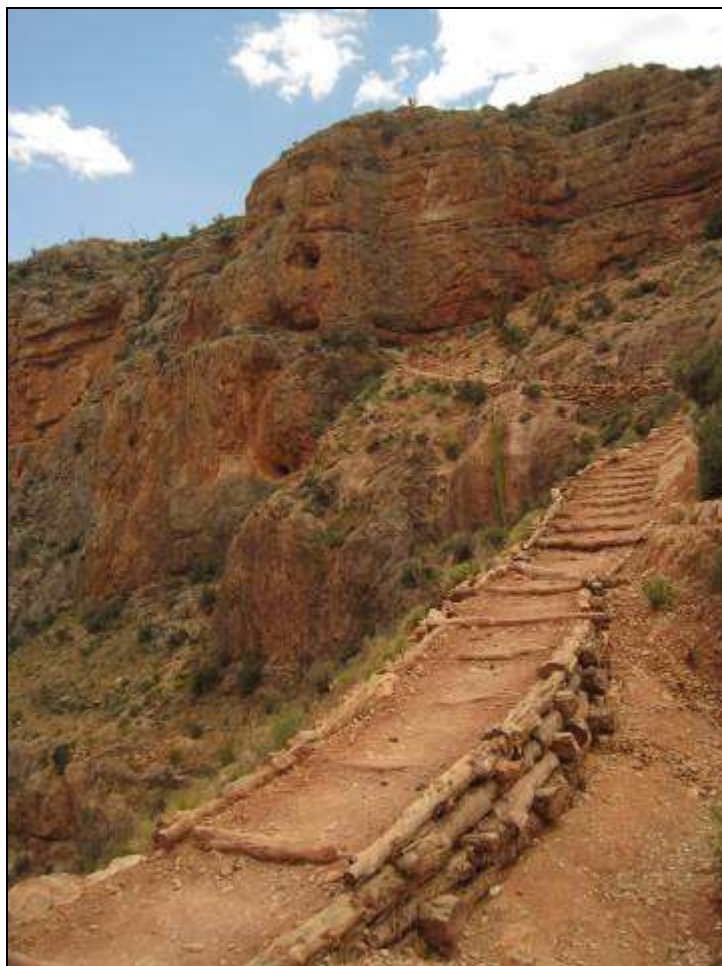
Photograph 44. Southern approach and tunnel of the Kaibab Suspension Bridge, looking northwest, 2011. Source: LSD.



Photograph 45. Stone risers near the South Kaibab trailhead, looking southeast, 2011. Source: LSD.



Photograph 46. Dry-laid stone retaining walls near the South Kaibab Trailhead, looking southeast, 2011. Source: LSD.



Photograph 47. Raised log steps along the South Kaibab Trail, east of Skeleton Point and south of the Tip-off, looking west, 2011. Source: LSD.

their construction methods are characteristic of Rustic architectural style. However, all of these features are considered to be non-contributing structures to the South Kaibab Trail Landscape Area since they post date the District's period of significance.

Another contributing feature of the South Kaibab Trail Landscape Area is the Cedar Ridge Fossil Fern Exhibit (#9450) (Photograph 48). The exhibit was constructed by the CCC near the western edge of the Cedar Ridge overlook in the 1930s to protect fossilized ferns that were uncovered during their reconstruction efforts along the South Kaibab Trail. The structure, which remains largely the same as when it was first constructed, consists of an exhibit case with a low wall and two piers of coursed rubble masonry. The small side-gabled roof of the structure is supported by stone piers and round log brackets, and an upright interpretative panel framed with round logs is present beneath the piers. The fern fossils remain in-situ and are protected by a large wood-framed exhibit case which rests below the interpretative panel. A historic photograph of the exhibit, taken in 1936, suggests that the only modification to the structure is replacement of the original juniper bark roof with wooden shingles, which occurred after the District's period of significance (see Photograph 16; Photograph 48).



Photograph 48. Fossil Fern exhibit at Cedar Ridge, looking northwest, 2011. Source: LSD.

Non-contributing/compatible buildings within the South Kaibab Trail Landscape Area include the waterless restroom facilities at Cedar Ridge and the Tip-off (Photograph 49 and Photograph 50). These buildings are nearly identical in construction to the restroom buildings along the Bright Angel and Colorado River Trails, except they are elevated to house septic facilities underneath the main floor. The bottom story consists of storage space and provides access to the pit toilet facilities, which are located on the second floor. Both of the buildings rest on concrete foundations and have side-gabled roofs; the roof of the Cedar Ridge restroom building is covered with corrugated metal and the building at the Tip-off has a sheet metal roof. The exterior of the second story of both buildings is sheathed with board and batten siding; the bottom floor of the building is covered with horizontal wooden siding. The main elevation of the buildings has a small porch that is accessed by a wooden ramp and supported by wooden posts. The buildings are painted brown so they are unobtrusive to the natural setting of the overlooks.

CONTRIBUTING FEATURES:

Structure Name

- 1. South Kaibab Trail
- 2. Stone risers
- 3. Log water bars
- 4. Log steps
- 5. Stone retaining walls
- 6. Cobblestone pavement
- 7. Cedar Ridge Fossil Fern exhibit
- 8. Trans-canyon Telephone Line
- 9. Kaibab Trail Suspension Bridge
- 10. Kaibab Trail Suspension Bridge Tunnel

LCS No./Structure No.

- 9453/TNK030
-
-
-
-
-
- 9450/220
- 55623/PHONE
- 9452/TBR050
-



Photograph 49. Cedar Ridge restroom building, looking southeast, 2011. Source: LSD.



Photograph 50. Restroom building at the Tip-off, looking north, 2011. Source: LSD.

NON-CONTRIBUTING, COMPATIBLE FEATURES:

Structure Name

1. Stone retaining walls (post 1942)
2. Stone steps near the South Kaibab Trailhead (ca. 2008–2010)
3. Cedar Ridge restroom building
4. Tip-off restroom building

YAKI POINT (SOUTH KAIBAB TRAILHEAD) LANDSCAPE AREA

The Yaki Point (South Kaibab Trailhead) Landscape Area has functioned as a staging area for pack trains delivering supplies throughout the inner canyon since the completion of the South Kaibab Trail in 1925. The NPS and Fred Harvey Company constructed numerous buildings and corrals in the area between 1926 and 1929 to facilitate their deliveries and the U.S. Army's Seventh Pack Train was stationed there during the 1930s to supply CCC efforts at the canyon. Although no buildings and structures dating to the U.S. Army's occupation of the area remain, seven of the original NPS and Fred Harvey Company buildings are present within the Yaki Point (South Kaibab Trailhead) Landscape Area. These buildings and structures, which include two residences (known as the NPS Residence and Fred Harvey Residence) (#56902 and 57284), two sheds (#56756 and 56903), two cisterns (#57306 and 57307), a garage (known as the NPS Garage) (#57260) and a stone mule barn (#55618), remain in good condition and have changed little since their original construction.

The first building constructed at Yaki Point (South Kaibab Trailhead) was the Fred Harvey Residence (#56902). Built for use as a guide's house in 1927, the residence currently consists of a one-story wood frame building with a clipped-gable roof. The building measures 24 feet long by 26 feet wide; a small shed-roofed porch is present on the main elevation of the building and an addition has been added to the building's rear ell. The porch is accessed by five concrete steps and is surrounded by wooden railings. The exterior of the building is sheathed with wooden V-groove siding and the roof is covered with wooden shingles. The majority of the windows are double hung aluminum sash. A shed (#56903) and cistern (#57307) are situated in close proximity to the residence. The shed, which consists of a small wooden frame building with a shed roof, is located approximately 33 feet northeast of the structure. The building sits on a stone foundation and has wooden weatherboard siding. The roof is covered with asphalt rolled roofing. The stone and concrete cistern is 5.5 feet high and 8 inches in diameter (Photograph 51). The structure is located on a slope behind the residence and does not appear to be in use.

The NPS Residence (#57284) was built by the NPS in 1927. The building is of similar size and construction to the Fred Harvey Residence and consists of a one-room wood frame structure with a gable roof and masonry foundation. The building has two additions and a wooden porch, all of which have shed roofs. The exterior of the building has horizontal lap siding with mitered and butted corners. The original windows have been replaced with aluminum sash windows, and the roof was replaced with wood shingles in 2010 (Anderson 2010). Despite these modifications, however, the building continues to maintain its rustic character and is considered a contributing feature of the Yaki Point (South Kaibab Trailhead) Landscape Area. The NPS garage (#57260) is located north of the residence and consists of a rectangular, two-room wood frame structure with a gable roof (Photograph 52). The structure has a battered stone foundation and three flights of stone steps on its southern, western, and eastern facades. The exterior of the building is sheathed with wooden lap siding that has mitered corners and the roof is covered with asphalt rolled roofing.



Photograph 51. Yaki Point (South Kaibab Trailhead) Residence Cistern, looking north, 2011. Source: LSD.



Photograph 52. The NPS Residence (at left), NPS Garage (at right), and a modern storage shed (in center) at Yaki Point (South Kaibab Trailhead), looking northeast, 2011. Source: LSD.

Built in 1929, the Fred Harvey Mule Barn (#55618) is the largest of the contributing structures at Yaki Point (South Kaibab Trailhead). The large stone barn measures 86-feet-long by 36-feet-wide; it has 10-foot-high rubble rock walls and a gambrel roof that is covered with leaf-shaped asbestos shingles (Photograph 53). The same shingles are also applied beneath the gables on its northern and southern elevations. The barn is accessed by large wooden doors which are present on the northern and southern elevations. The northern doors are covered with diagonal wooden planking, and the southern doors are clad with corrugated metal. Hay loft doors are present in the gables of the building and small three-lite windows with their original metal sashes are present on the east and west elevations. A corral with four detached shade structures is present to the southeast of the building and an attached corrugated metal corral has been added to its southern facade.



Photograph 53. Fred Harvey Mule Barn, showing the southern and western elevations, a detached shade structure, and corral fencing, looking north, 2011. Source: LSD.

A large above-ground cistern (#57306) is present to the east of the barn. The cistern is situated parallel to the barn wall and consists of a 22-foot-long by 8-foot-wide by 6-foot-high rectangular concrete structure that is faced with stone. Although the exact date of the structure is unknown, it appears to be contemporaneous with the mule barn. A small wooden shed (referred to as the NPS Hay Barn) is also present to the east of the mule barn. The shed consists of a wood frame structure with a concrete slab floor. The roof is covered with asphalt rolled roofing and the exterior of the building has board and batten siding. The exact age of the shed is unknown.

Non-contributing buildings and structures within the Yaki Point (South Kaibab Trailhead) Landscape Area include a power line, a waterless restroom facility (Photograph 54), a double corrugated metal pipe culvert with a masonry headwall located along Yaki Point Road near the trailhead parking lot, a water catchment system, and a water station near the South Kaibab trailhead (Photograph 55). All of these buildings and structures were built in the area between



Photograph 54. Restroom building at Yaki Point, looking north, 2011. Source: LSD.



Photograph 55. Water station at the South Kaibab Trailhead, looking northwest, 2011. Source: LSD.

1965 and 1989 and are therefore considered non-contributing to the Yaki Point Landscape Area.

Buildings and structures that are considered non-contributing/compatible to the landscape area consist of a mule shed (#56757) and associated masonry wall, a corral with a detached shade structure, and a storage shed (formerly the NPS Hay Barn). All of these buildings and structures are clustered together near the South Kaibab trailhead in the northern boundary of the landscape area (Photograph 56). Although the mule shed (known today as the NPS Mule Shed) was originally constructed in 1929, the building has been substantially modified and no longer retains integrity. Modifications to the wood frame shed-roofed structure include removal and replacement of the horizontal lap siding with unlapped 2 x 4 boards in some areas, window and door replacement, and construction of a shed-roofed addition to the building's southern elevation. The shed is surrounded by a metal-fenced corral. A shade structure, consisting of a corrugated metal roof supported by wooden poles, is present in the center of the fencing and a 35-foot-long by 2-foot-high masonry wall is located within the fence to the west of the mule shed. Although the wall, corral, and shade structure post-date the construction of the mule shed, these facilities are considered non-contributing/compatible features of the Yaki Point (South Kaibab Trailhead) Landscape Area due to their construction methods and adherence to Rustic style architectural principles. This classification also applies to the NPS Hay Barn, a tall rectangular structure with a front-gabled roof, which is situated on a graded flat to the north of the mule shed.



Photograph 56. NPS Mule Shed, Hay Barn, and Corral at Yaki Point (South Kaibab Trailhead), looking northeast, 2011. Source: LSD.

CONTRIBUTING FEATURES:

Structure Name	LCS No./Structure No.
1. Yaki Point NPS Garage	57260/SRB221
2. Fred Harvey Mule Barn	55618/1094
3. Mule Barn Cistern	57306/YAKI
4. Fred Harvey Residence	56902/1095
5. Residence Cistern	57307/YAKI2
6. Yaki Point Road and parking lot	57236/RDS047
7. NPS Shed	56903/1096
8. Yaki Point NPS Garage/Shed	56756/1097
9. NPS Residence	57284/SRQ084
10. South Kaibab Trail	9453/TNK030

NON-CONTRIBUTING, COMPATIBLE FEATURES:

Structure Name	LCS No./Structure No.
1. Restroom building	—
2. Stone wall at Yaki Point Barn (post 1942)	—
3. NPS Mule Shed	56757/SRB089
4. NPS Hay Barn	—

NON-CONTRIBUTING FEATURES:

Structure Name
1. Power line
2. Water catchment system
3. Double CMP culvert along Yaki Point Road
4. Water Station near the South Kaibab trailhead

NORTH KAIBAB TRAIL LANDSCAPE AREA

The North Kaibab Trail (was formally constructed by the NPS in 1928; prior to this date, the trail was informally developed and maintained by Utah entrepreneur David Rust in association with a tourist camp that he had established in the present-day location of Phantom Ranch. Completion of the trail created an important linkage between the North and South Rims of the Grand Canyon, resulting in a cross-canyon travel corridor.

While only one building—a waterless restroom facility northeast of the Supai Tunnel (Photograph 57)—is located along the current trail alignment, numerous structures associated with the trail itself are present within the North Kaibab Trail Landscape Area. The largest of these structures is the 20-foot-long Supai Tunnel, which was constructed by NPS trail crews in 1926. Other structures, such as steps and retaining walls constructed of locally-sourced boulders and river cobbles, concrete and stone spillways, and log and stone water bars, were built by the NPS between 1919 and 1928 (Photograph 58 and Photograph 59). Construction of these features likely removed most, if not all of the features built during Rust's initial development of the trail in the early 1900s. It is also probable that a number of the features (particularly those constructed of wood) were added to the trail after 1942 due to the recurrent flooding of Bright Angel Creek. However, repairs to the trail in the years post-dating the District's period of significance have not affected the trail's overall integrity, as most of the walls, steps, and water bars were constructed in the same location using similar types of rustic materials. The restroom facility, which is identical in construction to those located along the South Kaibab Trail (see Photograph 49 and Photograph 50), is also considered a non-contributing/compatible building due to its adherence to the architectural principles of Rustic style.



Photograph 57. Waterless restroom building at Supai Tunnel, looking northeast, 2011. Source: LSD.



Photograph 58. Native stone water bar and concrete and stone spillway located along the North Kaibab Trail within the "Box" formation, looking northeast, 2011. Source: LSD.



Photograph 59. North Kaibab Trail, showing stone paving and log steps in the vicinity of the Needle, looking west, 2011. Source: LSD.

Other non-contributing/compatible structures within the North Kaibab Landscape Area include seven footbridges located at various creek crossings along the trail. With the exception of the Bridge in the Redwall, which spans Roaring Springs Canyon near the terminus of the trail (Photograph 60), all of the bridges are unnamed. Four of the bridges (including the Bridge in the Redwall) were installed by contractor Halverson-Lent during reconstruction of the North Kaibab Trail following the 1966 flood; the dates of construction for the remaining bridges are unknown. All of the bridges have steel superstructures with concrete abutments. Two of the bridges have wooden plank decks and the decks of the remaining bridges are constructed of steel.

CONTRIBUTING FEATURES:

Structure Name

- 1. North Kaibab Trail
- 2. Stone steps along North Kaibab Trail
- 3. Stone retaining walls
- 4. Concrete and stone spillways
- 5. Supai Tunnel
- 6. Trans-canyon Telephone Line

LCS No./Structure No.

9454/TRAIL2

—

—

—

—

55623/PHONE



Photograph 60. Bridge in the Redwall, looking north, 2011.
Source: LSD.

NON-CONTRIBUTING, COMPATIBLE FEATURES:

Structure Name

1. Stone retaining walls (post 1942)
2. Log and stone water bars (post 1942)
3. Bridge in the Redwall
4. Restroom building at Supai Tunnel
5. Footbridge in the vicinity of the Pumphouse Residence
6. Footbridge north of Phantom Ranch
7. Footbridge south of the Box
8. Footbridge north of the Box
9. Footbridge north of the Box
10. Footbridge in the vicinity of Ribbon Falls

COTTONWOOD CAMPGROUND LANDSCAPE AREA

Established in 1927 by the NPS, the Cottonwood Campground Landscape Area marks the halfway point between the Bright Angel Campground at Phantom Ranch and the North Kaibab trailhead. The area was also temporarily used as a fly camp by CCC enrollees building a spur trail from the North Kaibab Trail to Upper Ribbon Falls in 1934. Due to its proximity to Bright Angel Creek, the campground has been repeatedly damaged by flooding; consequently, nearly all of the buildings and structures dating to the period of significance have been

destroyed and rebuilt. Only three contributing buildings and structures—the North Kaibab Trail (#9454), Cottonwood Ranger Station (#9441), and Trans-canyon Telephone Line (#55623)—remain in the Cottonwood Campground Landscape Area. The North Kaibab Trail forms the main pathway through the campground and short footpaths extending from the trail provide access to the campsites and a modern restroom facility. The Cottonwood Ranger Residence is located along the west edge of the trail and consists of a one-story wood frame building with cross-gabled roof (Photograph 61). The building has a stone foundation and stone corner piers. Stone patios are present on the main and rear elevations of the building and the rear patio is enclosed with a wooden picket fence. The exterior of the building is sheathed with board and batten siding and the roof is covered with wooden shingles. The Trans-canyon Telephone Line is affixed to the northeast corner of the residence and extends to the southeast.



Photograph 61. Main elevation of the Cottonwood Ranger Residence, looking north, 2011. Source: LSD.

In addition to the residence and telephone line, three non-contributing/compatible buildings, including the restroom facility and two sheds are also present within the landscape area. NPS correspondence suggests that at least one of the sheds was originally a comfort station that was converted to a storage building and workshop during a 1985 improvement project (Sharro 1985). The age of the second shed is unknown. The current waterless restroom building located east of the North Kaibab Trail was also constructed at this time (Photograph 62). All three of these buildings are built of rustic materials and are similar in construction to other NPS buildings dating to the District's period of significance (Photograph 63).

Non-contributing structures include a stone-lined helicopter pad, a buried power line, and fenced mule corral. The age of the helicopter pad and mule corral is not known although both appear to be of modern construction. The power line, which stretches from the campground to Roaring Springs, was also installed as part of the 1985 campground improvement project (Sharro 1985).



Photograph 62. Cottonwood Campground restroom building, looking north, 2011. Source: LSD.



Photograph 63. Storage building to the southeast of the Cottonwood Campground Mule Corral, looking east, 2011. Source: LSD.

CONTRIBUTING FEATURES:

Structure Name

1. Cottonwood Ranger Residence
2. North Kaibab Trail
3. Trans-canyon Telephone Line

LCS No./Structure No.

9441/NRQ092
9454/TRAIL2
55623/PHONE

NON-CONTRIBUTING, COMPATIBLE FEATURES:

Structure Name

1. Restroom building
2. Storage building northeast of the Cottonwood Ranger Residence (ca. 1985)
3. Storage building southeast of the Mule Corral

NON-CONTRIBUTING FEATURES:

Structure Name

1. Helicopter pad
2. Power line (ca. 1985)
3. Mule corral

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

The Bright Angel Campground Landscape Area was established as a recreational campground in 1936; prior to this date, the area was home to CCC Company 818 who temporarily resided at the camp (then known as CCC Camp NP-3-A) while they performed numerous projects in the inner canyon between 1933 and 1936. Although the CCC camp originally contained 39 buildings and structures (see Photograph 35), nearly all of these were tents or other temporary edifices that were removed when the camp was abandoned (Cleeland 1989b, 55; Purvis 1989, 36). Only two permanent buildings and structures—a comfort station and a footbridge spanning Bright Angel Creek—were constructed by the CCC

during their tenure at the camp. The footbridge was destroyed by flooding shortly after its construction, and was subsequently rebuilt by the NPS in 1936.

The Comfort Station remained unaltered until 1960, when the NPS rehabilitated the structure as part of larger renovation project at Bright Angel Campground. The project, which took nearly a year to complete, also involved the construction of a three-bay hikers' shelter (known today as the Adirondack Shelter) to the southeast of the restroom building. Both of these structures still remain in the Bright Angel Campground Landscape Area. The renovated Comfort Station consists of a wood frame building with a front-gabled roof (Photograph 64). The building is constructed upon a concrete foundation. The exterior of the building is



Photograph 64. Comfort Station at the Bright Angel Campground, looking northwest, 2011. Source: LSD.

sheathed with board and batten siding and the roof is covered with corrugated metal. Porches supported by native stone piers are present at the northern and southern ends of the building; stone veneer has been applied to the corners of the building to give it a rustic appearance. The building lacks windows but has louvered shutters on its eastern façade for ventilation.

The native stone and wood frame Adirondack shelter is also built on a concrete foundation (Photograph 65). The shelter has a shed roof that is covered with asphalt shingles. Both of the buildings are considered to be non-contributing/compatible features of the Bright Angel Campground Landscape Area due to their adherence to the architectural principles of Rustic style.

In December 1966, the footbridge spanning Bright Angel Creek was again destroyed by flooding when heavy rains at the canyon caused water levels within the creek to rise 30 feet over a three-day period (see Photograph 20). In addition to the bridge, the flood destroyed nearly all of the stone retaining walls that lined the creek banks to the east of the campground. When the floodwaters receded, the NPS reconstructed the stone walls in the same design as



Photograph 65. Adirondack Shelter at Bright Angel Campground, looking northeast, 2011. Source: LSD.

to create a more durable structure at the creek crossing. The resulting bridge, which continues to provide access to the campground from the North Kaibab Trail, consists of a steel deck bridge with steel side walls (Photograph 66). To balance the discordant nature of the steel materials, the abutments of the bridge were constructed of native stone and stone piers were placed at the bridge's four corners. Additionally, wooden planks have been installed above the steel deck of the bridge to give it a more rustic appearance.

NON-CONTRIBUTING, COMPATIBLE FEATURES:

Structure Name

1. Adirondack Shelter
2. Stone retaining walls
3. Footbridge
4. Comfort Station

ROARING SPRINGS LANDSCAPE AREA

Although the Roaring Springs Landscape Area has been the source of water for facilities on the North Rim of the Grand Canyon since 1928, only two structures—a remnant section of the UPRR cable tramway system and the Trans-canyon Telephone Line—dating to the period of significance are currently present in this landscape area. The UPRR structure, which consists of a partially-collapsed wooden platform, is located in the Day Use Area near the bottom of Roaring Springs Canyon to the west of the spur trail; a waterless restroom facility, built by the NPS in 1999, is located 162 feet to the northwest. The platform is built into an adjacent slope to the west of Bright Angel Creek and has two support posts at its western end (Photograph 67). A large wooden spool containing metal cable is present upslope and to the northwest of the structure and numerous artifacts, including fragments of metal rebar, chains, bolts, and mounting hardware, surround the structure. Although the exact age and function of



Photograph 66. Footbridge spanning Bright Angel Creek between the North Kaibab Trail and the Bright Angel Campground, looking northeast, 2011. Source: LSD.



Photograph 67. Remnant of the UPRR cable tramway documented in the Day Use Area at Roaring Springs, looking northwest, 2011. Source: LSD.

the platform is unknown, its location within the canyon and its proximity to the creek suggests that it is related to the construction of the 1928 UPRR water system.

In addition to the UPRR structure, metal poles of the Trans-canyon Telephone Line are present in all three of the developed areas of Roaring Springs Landscape Area. The poles, which have a single arm and clear glass insulators, parallel the alignment of the North Kaibab Trail along the western edge of Roaring Springs Canyon. These two structures are the only contributing features of the landscape area that date to the District's period of significance.

With the exception of the composting toilet at the Day Use Area which is of modern construction, the rest of the buildings and structures present within the Roaring Springs Landscape Area are associated with the current Trans-canyon Water System, which was initially constructed by the NPS between 1965 and 1970 to provide water to both the North and South Rims. During this time, the existing UPRR facilities at Roaring Springs, which consisted of a pumphouse, powerhouse, and sluice (located in what is currently the Pumphouse Residence Area), and all infrastructure not incorporated into the new design were razed and rebuilt to accommodate the increased capacity of the waterline. Non-contributing/compatible buildings and structures dating to this period within the Pumphouse Area include the Trans-canyon Water System pipe, as well as the Pumphouse (ca. 1978), a water intake structure, and associated stone steps, stone and concrete culverts, and native stone retaining walls (Photograph 68). Additionally, the unmarked spur trail leading from the North Kaibab Trail to the Pumphouse Area is also considered a non-contributing/compatible structure of this landscape area. The primitive trail, which skirts the western edge of Roaring Springs Canyon,



Photograph 68. Pumphouse located within the Roaring Springs Landscape Area, looking southeast, 2011. Note the non-contributing wooden retaining wall to the left of the pumphouse. Source: LSD.

was initially used by Pumphouse operator Bruce Aiken to access facilities in the Pumphouse Area between 1973 and 2003. The trail, which is also a circulation feature of the District, continues to serve as the primary route for NPS staff to access the facilities of the current water system. Other buildings and structures located in the area that are considered to be non-contributing include a helipad and an associated set of concrete steps, a utility shed, and numerous wooden retaining walls (see Photograph 63).

The former Pumphouse Operator's Residence is the most notable building present within the Roaring Springs Landscape Area. This building is located in Pumphouse Residence Area to the east of the North Kaibab Trail and along the west bank of Bright Angel Creek (Photograph 69). Historic photographs on display in the interior of the residence suggest that the building replaced an earlier caretaker's residence that was constructed by the UPRR in the area in 1928. The building was initially constructed in 1972 as residence for pump house operator and renowned Grand Canyon artist Bruce Aiken and his family. The building currently consists of a wood frame structure with a side-gabled roof. The building rests upon a concrete foundation and porches are present on the northern, southern, and eastern elevations. Stone veneer has been applied to the steps and foundation to give the building a rustic appearance. It has been modified numerous times, most recently in the 1990s, when the interior of the building was remodeled. Today, the building is used as a ranger residence and overnight quarters for dignitaries and politicians visiting the canyon and provides restroom facilities for recreationists and backpackers traveling along the North Kaibab Trail. Structures associated with the residence, such as a possible stone cistern, three sets of native stone steps leading from the lower yard to the building, and numerous stone retaining walls, are also considered to be non-contributing/compatible features of the Roaring Springs Landscape Area.



Photograph 69. Main elevation of the former Pumphouse Operator's Residence at Roaring Springs, looking southwest, 2011. Source: LSD.

One non-contributing structure—a storage and helipad building—is located downslope and to the west of the residence. This building, which is situated in the same location as the 1928 UPRR pumphouse, is similar to the helipad structure in the Pumphouse Area and consists of a flat-roofed rectangular structure with a helipad above it (Photograph 70). The building has a concrete foundation and its exterior is sheathed with aluminum siding.



Photograph 70. Modern helipad and storage building in the vicinity of the Roaring Springs Pumphouse Operator's Residence, looking north, 2011. Source: LSD.

CONTRIBUTING FEATURES:

PUMPHOUSE OPERATOR'S RESIDENCE AREA

1. Trans-canyon Telephone Line

PUMPHOUSE AREA

1. Trans-canyon Telephone Line

DAY USE AREA

Structure Name

1. Remnant of the UPRR cable tramway
2. Trans-canyon Telephone Line

NON-CONTRIBUTING FEATURES:

PUMPHOUSE OPERATOR'S RESIDENCE AREA

Structure Name

1. Modern storage and helipad building

PUMPHOUSE AREA

Structure Name

1. Utility shed
2. Concrete steps
3. Helipad
4. Wooden retaining walls

NON-CONTRIBUTING, COMPATIBLE FEATURES:

PUMPHOUSE OPERATOR'S RESIDENCE AREA

Structure Name

1. Stone retaining walls
2. Pumphouse Operator's Residence
3. Stone steps
4. Possible stone cistern

PUMPHOUSE AREA

Structure Name

1. Roaring Springs Pumphouse
2. Trans-canyon Water System
3. Water intake structure
4. Stone retaining walls
5. Unmarked spur trail to Pumphouse Area

DAY USE AREA

Structure Name

1. Restroom building (ca. 1999)
2. Spur trail to Day Use Area
3. Stone steps along the spur trail
4. Stone water bars along the spur trail

3. CIRCULATION:

BRIGHT ANGEL TRAIL LANDSCAPE AREA

Archeological evidence supports Native American use and occupation of the Bright Angel Trail Corridor as early as 6000 BC. This trail has historically provided an important connection from the South Rim to the Colorado River, and is currently part of the Cross Canyon Corridor connecting the North Rim to the South Rim. After USGS surveyor Francois-Emile Matthes first cleared a route from the North Rim down the Bright Angel Fault to the Colorado River (known today as the "Old Bright Angel Trail"), this corridor was used to transport residents living on the north side of the canyon to Flagstaff and Kingman on the south of the canyon. Today, it continues to be an important Trans-canyon link for visitors and park staff. The "rim-to-rim" or "rim-to-rim-to-rim" experience has shaped the identity of visitors, recreationists, and athletes. For many visitors, hiking the corridor is a rite of passage, and a milestone that only the canyon can offer.

As the most heavily used trail within the Cross Canyon Corridor Historic District, the Bright Angel Trail serves as a collector route for the east-west and north-south trending Plateau Point and Tonto Trails (also referred to as the Tonto West Trail) and provides connectivity between the major destination points of the South Rim, Colorado River Trail, and Indian Garden (Photograph 71). Both of these trail connections occur near the Mule Corral at Indian Garden and approximately 1,400 feet north of Indian Garden, respectively.



Photograph 71. Junction of the Bright Angel Trail, Plateau Point, and the Tonto East and West Trails near the mule corral at Indian Garden, looking north, 2009. Source: LSD.

While the actual alignment of the Bright Angel Trail has shifted over time due to reroutes necessitated by flooding and rock slides, as well as planned NPS efforts to lessen the grade for ease of travel, these adaptations have done little to alter the overall course of the trail. The greatest changes to the trail alignment occurred between 1929 and 1939 when the NPS rerouted several areas originally constructed by Niles Cameron. These adjustments and reconstructions included the Jacob's Ladder section, the Upper and Lower Tunnels, the slopes along the Bright Angel Fault, the section of trail from Indian Garden to the Devil's Corkscrew, the Devil's Corkscrew, and the section of trail from the base of Devil's Corkscrew to the mouth of Pipe Creek.

The tread of the Bright Angel Trail is generally constructed of dirt, sand, or loose gravel depending on the geological strata it traverses. Erosion control devices consist of wooden pine logs (staked in place with steel rod) or stone steps placed perpendicular to the route of travel to hold soil in place or to direct surface flows across the tread to the outslope area. In areas where the trail's tread receives extreme wear, usually on sloped areas that also receive hard turning impacts; a cobblestone pavement approach has been installed to protect the trail's tread. In addition, the spaces between some of the adjoining switchbacks have been infilled with dry-stacked native stone to prevent user cross-cutting and subsequent erosion (Photograph 72). At various locations adjacent to the trail, loose rock material from slope



Photograph 72. Switchback with dry-stacked stone infill, looking north, 2009. Source: LSD.

failures or rock-face spalling has been stockpiled in the form of large cairns for future trail repairs. For visitors, these informal stockpile-cairns serve as reminders to the ever-changing forces that have taken millions of years to create the canyon.

The width of the trail varies from 4 feet to 10 feet depending on the adjacent constraints, including steep slopes, drainages, rocky outcrops/ledges, and vegetation. Significant among the Bright Angel Trail's character-defining qualities, are the level vertices of the switchbacks and wider protrusions of the trail's tread that allow users to stop and rest and to enjoy the many views of the canyon—while allowing the trail traffic and mule trains to pass by safely (see Photograph 121).

In addition to the main arterial trail, the Bright Angel Trail circulation system also includes secondary spurs to rest houses, restroom buildings, and scenic viewpoints. These spurs are typically constructed with the same materials and in the same manner as the main trail; however they are usually narrower than the main trail, possibly because of the lack of mule traffic.

CONTRIBUTING FEATURES:

1. Circulation along Bright Angel Trail, and connectivity with the Colorado River Trail, East Tonto Trail, and Plateau Point Trail
2. Connectivity with use areas such as the South Rim, Indian Garden, and rest houses
3. Lower Tunnel (ca. 1930s)
4. Upper Tunnel (ca. 1930s)

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Trail segments reconstructed after the period of significance
2. Secondary access trails to restroom buildings and scenic viewpoints constructed after the period of significance

INDIAN GARDEN LANDSCAPE AREA

The Bright Angel Trail was the primary circulation corridor through Indian Garden during the period of significance and it remains so at present. In addition to the Bright Angel Trail, the site of Indian Garden is connected to the rest of the Grand Canyon by three trails—the Tonto East and Tonto West Trails and the Plateau Point Trail. Unlike the Bright Angel Trail, which was rerouted further east of its original alignment by the NPS in the 1920s, the Tonto East, Tonto West, and Plateau Point Trails have undergone few alignment modifications. The greatest change occurring to these trails was the renaming of the Plateau Point Trail, which was changed from its original name, the “Trail to Hermit Basin,” to its current name at an unknown date. Additionally, vestiges of a spur trail, known historically as the “Trail to Turtle Head,” that once connected the Plateau Point and Bright Angel Trails remain visible in the Indian Garden Landscape Area.

As with spatial organization, the circulation patterns in Indian Garden have become increasingly complex since 1903, due to new development occurring during and after the District’s period of significance. Between 1903 and 1927, circulation in Indian Garden was fairly simple and oriented along the Bright Angel Trail. Separate circulation systems likely consisted of narrow and poorly-defined earthen trails that branched from the Bright Angel Trail and led to the mule corral and sheds, within the row of tents, around the grouping of maintenance and operations facilities, and possibly to the old alfalfa field.

When the NPS took control of the site in 1927, and until the period of significance ended in 1942, their revitalization efforts simultaneously removed most of Cameron’s informal circulation routes and created new patterns of their own. These formal paths and trails, built during the latter part of the period of significance, were also earthen in composition and included native stone steps and edging and wooden signage.

The most significant difference between the current and historic circulation patterns in Indian Garden is the ratio of internal versus external circulation features. During the period of significance, circulation systems were relatively open and interconnected, almost forming a singular network. At present, Indian Garden has several circulation systems that are independent, yet linked together at certain points within the site. These internal systems are evident in the Administration Area, Campground Area, and Day Use Area. These areas are internally focused, yet can be reached by connector trails.

In the Administration Area, circulation is solely pedestrian and is formed by a network of stone-edged trails that originate at the Bright Angel Trail. The primary entrance to the area is a short, formal, north-south trending trail that passes by the Ranger Residence and terminates at a flight of wooden stairs. From the stairs, a secondary trail extends to the sand filter beds, Pump Operator’s Residence, and helispot. The area also has two “loosely-defined” spur trails that are used by NPS personnel only to expedite access from the Administrative Area to the helispot and the bunkhouse (JMA 2005, III-30).

Destinations within the Day Use Area are primarily accessed by a network of informal spur trails that originate in the area of the former picnic grounds and weave throughout the grounds. These trails, which terminate near the mule barn, are unlined and have earthen treads. In areas where the trails are frequently inundated with water, stepping stones and logs have been placed along the alignment to allow continued and safe passage during storms.

In the Campground Area, pedestrian circulation exists in a “hierarchical form,” with a central trail forming the spine of the area and narrow, informal spur trails leading to comfort station, camp sites, and public areas (JMA 2005, III-44). As the camp sites function as enclosed gathering spaces rather than open travel corridors, circulation in the area is undefined and informal (JMA 2005, III-44).

Circulation in the Pump Station and Corral Area consists of formal, stone-edged trails and narrow, informal spur trails. Formal trails include a trail to the helispot and South Pumphouse; a “ramp-like,” packed earth trail that leads to the comfort station west of the pumphouses; and another packed-earth trail that goes to the mule barn. All of these trails originate at the Bright Angel Trail. The spur trails are unlined; they weave through the area, connecting with the formal trails and extending west to the into the Day Use Area. These trail networks, as well as those in the Administration, Day Use, and Campground Areas, were largely designed and constructed by the NPS after the 1940s, and as such, are considered to be non-contributing compatible features of the Indian Garden Landscape Area.

Non-contributing features of the Indian Garden Landscape Area include several concrete sidewalks, all of which are of recent construction. One of the sidewalks is located in the Administration Area and extends along the eastern elevation of the Storage/Laundry/First Aid building. Another short span of concrete sidewalk is present along the western edge of the pumphouse complex in the Pump Station and Corral Area. Additionally, numerous concrete sidewalks provide access to the SAR Caches in the Day Use Area.

CONTRIBUTING FEATURES:

DAY USE AREA

1. Spur Trail—Bright Angel Trail to Search and Rescue (SAR) Cache

NORTH INDIAN GARDEN AREA

1. Spur Trail—Bright Angel Trail to SAR Cache
2. Tonto East Trail
3. Tonto West Trail
4. Plateau Point Trail

NON-CONTRIBUTING FEATURES:

ADMINISTRATION AREA

1. Concrete sidewalk that spans the eastern elevation of the Storage/Laundry/First Aid building

PUMP STATION AND CORRAL AREA

1. Concrete sidewalk along the western edge of the pumphouse complex

DAY USE AREA

1. Concrete sidewalks near the SAR Cache entrances

NON-CONTRIBUTING, COMPATIBLE FEATURES:

BRIGHT ANGEL TRAIL CORRIDOR

1. Spur trails—formal
2. Spur trails—informal

ADMINISTRATION AREA

1. Stone-edged trail to Ranger Residence
2. Secondary trail
3. Spur trail—Bright Angel Trail to helispot
4. Spur trail—Bright Angel Trail to Bunkhouse

CAMPGROUND AREA

1. Central trail
2. Spur trails—to comfort stations and camping areas

PUMP STATION AND CORRAL AREA

1. Stone-edged trail to heliport
2. Ramp-like trail to comfort station
3. Stone-edged trail to south of Mule Barn
4. Spur trail—informal

DAY USE AREA

1. Network of informal spur trails that lead throughout the area and terminate near the mule barn

COLORADO RIVER TRAIL LANDSCAPE AREA

The Colorado River Trail connects the Bright Angel Trail, near the mouth of Pipe Creek, to the South Kaibab Trail. The trail is built through the sheer granitic cliffs of the canyon and a sand dune area approximately 100 feet above the Colorado River. Due to the extreme physical constraints of Granite Gorge, the original alignment remains as it was initially constructed by Louis Purvis and his CCC crew between 1933 and 1936. The outer edge of the trail is supported by stacked stone walls in many areas which have assisted in retaining the trail's integrity of location and materials. Today, the Colorado River Trail functions as an important link in the Cross Canyon Corridor. The trail currently provides connection between the Bright Angel Trail, the South Kaibab Trail, and Phantom Ranch via the Silver Bridge.

The tread of the Colorado River Trail is generally constructed of loose gravel and dirt, or sand, depending on the geological strata it traverses. The width of the trail varies from 4 feet to approximately 8 feet depending on the constraints of the adjacent terrain, such as slopes, rocky outcrops or ledges, and shifting sand dunes.

CONTRIBUTING FEATURES:

1. Circulation along the trail between Bright Angel Trail and the South Kaibab Trail

NON-CONTRIBUTING FEATURES:

1. Connectivity to Phantom Ranch via the Silver Bridge

PHANTOM RANCH LANDSCAPE AREA

The North Kaibab Trail provides the primary means of circulation through the Phantom Ranch Landscape Area, and as such, the buildings and structures in the northern portion of the ranch are oriented toward the trail. This general circulation pattern has remained the same since the District's period of significance. A network of ancillary dirt footpaths function to connect the North Kaibab Trail with the area's buildings and structures, as well as to an unnamed bridge along Bright Angel Creek that provides access to the northern end of Bright Angel Campground. It is unclear how these foot trails developed but their irregular alignments and generally direct routes suggest that they likely formed as "cow paths" through repeated use by guests and employees.

Within the Phantom Ranch Landscape Area, the North Kaibab Trail is approximately 4 feet to 6 feet in width and consists of dirt and sand tread that is generally lined with various sizes of rounded river rock. The footpaths in this area are generally lined with low ground cover vegetation and grasses, with treads of sand and dirt.

The southern portion of the Phantom Ranch Landscape Area encompasses the Bright Angel Creek delta, which is bisected by the creek. The North Kaibab Trail begins at the south end of the Kaibab Suspension Bridge, at which point it crosses the river atop the bridge and then traverses the eastern side of the delta, paralleling the creek as it heads north into Bright Angel Canyon. Here, the North Kaibab Trail follows the same circulation pattern that has been in place since the period of significance.

Several subordinate trails split from the North Kaibab Trail before it reaches the mouth of Bright Angel Canyon. These subordinate trails lead to the beach along the Colorado River, providing access for hikers and boaters alike. The trails leading to the river are generally between 3 feet and 4 feet wide and have a sandy tread. It is unknown precisely when these trails were developed.

Another unnamed spur trail, measuring between 4 feet and 6 feet wide, splits from the North Kaibab Trail near the mouth of Bright Angel Canyon and extends over the Rock House Bridge. This trail continues through a cluster of NPS buildings and connects to the Colorado River Trail via the Silver Bridge. This trail alignment was established after construction of the Silver Bridge in the late 1960s and does not contribute to the historic circulation pattern of the Phantom Ranch Landscape Area. This spur trail also serves as an arterial route for several ancillary trails and footpaths on the west side of the Bright Angel Creek delta. These subordinate paths provide connectivity to the buildings and structures in this area, as well as a connection to the southern end of the unnamed spur trail that extends north to Bright Angel Campground.

CONTRIBUTING FEATURES:

1. Circulation along the North Kaibab Trail
2. Circulation along subordinate trails and footpaths established during the period of significance

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Circulation along the spur trail connecting the Silver Bridge to the North Kaibab Trail
2. Circulation along subordinate trails and footpaths established after the period of significance

SOUTH KAIBAB TRAIL LANDSCAPE AREA

Unlike the Bright Angel and North Kaibab Trails, there has been little archeological evidence to suggest that the South Kaibab Trail was prehistorically or historically used by Native Americans. This is logical considering the fact that, unlike the Bright Angel Trail, the South Kaibab Trail did follow an existing trail route, but was purposefully engineered by the NPS between 1924 and 1925 to be the most efficient and direct route to access the inner canyon and Colorado River corridor. The South Kaibab Trail has also historically provided a dependable year-round route to the inner canyon as its exposed alignment takes advantage of the warm winter sun to melt snow off the trail. The trail is an integral part of the Cross Canyon Corridor that connects the North Rim to the South Rim and provides a Trans-canyon link for NPS and Xanterra staff, as well as tourists.

The South Kaibab Trail also serves as a limited-access trail that connects other trails within the canyon. The Tonto Trail, Colorado River Trail, and North Kaibab Trail are all directly linked to the South Kaibab Trail, which acts the main artery for these routes. The trail also connects Yaki Point (South Kaibab Trailhead) and the Cedar Ridge and Tip-off Day Use Areas.

Of all the rim-to-river trails in the Cross Corridor Trails Historic District, the meticulously-engineered South Kaibab Trail has, over time, had the fewest re-routes, and therefore, the current course of the trail is very similar to its original alignment which existed during the period of significance. The greatest repairs to the trail have occurred as a result of flooding and from occasional rock slides, although much of this required maintenance has not altered the overall alignment of the trail.

Depending on the geological strata through which the trail traverses, the tread of the trail is generally constructed of dirt or loose gravel. Wood logs and stone steps are generally used to control erosion on the trail. Occasionally, surface water is directed across the trail by stone and log water bars to reduce impacts from concentrated run-off. Cobblestone paving or vertical wood pieces are occasionally used in heavily impacted areas such as the turning

points on switchbacks. Some of the adjoining legs of switchbacks have also been covered with dry-stacked native stone to prevent user cross-cutting and subsequent erosion. The width of the trail generally varies from 4 feet to 6 feet depending on the constraints of the adjacent terrain, such as steep slopes, drainages, and rocky outcrops and/or ledges.

Other than the main arterial trail, the South Kaibab Trail also includes several spur trails. These trails join with the main trail alignment at both Skeleton Point and Panorama Point, and consist of dirt footpaths with few constructed features.

CONTRIBUTING FEATURES:

1. Circulation along the South Kaibab Trail, and connectivity with the Colorado River Trail, Tonto Trail, and North Kaibab Trail
2. Connectivity with use areas such as Cedar Ridge, the Tip-off, and multiple overlooks

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Trail segments reconstructed after the period of significance
2. Secondary access trails to restroom buildings and scenic viewpoints constructed after the period of significance

NORTH KAIBAB TRAIL LANDSCAPE AREA

For hundreds of years, the general route of the North Kaibab Trail along Bright Angel Fault functioned as a transportation corridor for Native Americans. Beginning in the late 1800s, it also served as an access route into the canyon for prospectors, hunters, North Rim cattleman and residents, and recreationists. By 1902, USGS surveyor Francois-Emile Matthes had cleared the first known route along the Bright Angel Fault from the North Rim to the Colorado River. Construction of the trail by the NPS in 1928 solidified this important linkage, and resulted in the completion of the first (and only) cross-canyon travel corridor at the Grand Canyon. This date also marked a distinct change in the circulation of the trail, as NPS crews realigned the portion of the trail above Manzanita Creek to follow Roaring Springs Canyon rather than Bright Angel Canyon. As the park's only maintained trail from the North Rim to the Colorado River, the North Kaibab Trail remains a critical node of the cross-canyon corridor, providing rim-to-rim travel within the park.

The North Kaibab is a limited-access trail that serves as an arterial spine for both the Clear Creek Trail and the Old Bright Angel Trail. The trail also provides connectivity between major destination points, including the North Rim, Roaring Springs Day Use Area, Roaring Springs Residence, Cottonwood Campground, Phantom Ranch, and Bright Angel Campground.

Due to its close alignment with Bright Angel Creek, the North Kaibab Trail has been re-routed and reconstructed more than any other rim-to-river trail at the Canyon. Rain and snowpack on the North Rim continually turn the creek into a destructive erosional force. The most destructive flood occurred in 1966, when rains and melting snowpack caused the creek to rise 30 feet above its normal level for three consecutive days. Both the upper and lower portions of the North Kaibab Trail were obliterated by the flood, although the section from the Colorado River to Roaring Springs sustained the worst damage. All of the bridge crossings over the creek were likewise destroyed and rebuilt, and portions of the trail were closed for reconstruction until the summer of 1971. Although the exact alignment of the trail has changed significantly since the period of significance, the general alignment of the trail that traverses both Bright Angel Canyon and Roaring Springs Canyon has remained unaltered since its original construction in 1928.

The tread of the North Kaibab Trail is generally constructed of dirt, sand, or loose gravel depending on the geological strata it traverses. Short stretches of small, rounded river rock have even been used in The Box where tread material from Bright Angel Creek is easier to access than other stone types. Erosion control devices consist of wooden pine logs or stone steps placed perpendicular to the route of travel. These devices function to hold soil in place

and to direct surface water across the tread and into stone-lined drainage ditches to prevent concentrated erosion. Cobblestone pavement is also present in heavily-used areas to protect the trail's tread. Depending on adjacent topographic and biological constraints such as steep slopes, drainages, rocky outcrops and/or ledges, and vegetation, the width of the trail varies from 4 feet to 6 feet.

The North Kaibab Trail also provides a connection to the Ribbon Falls spur trail, which was constructed by the CCC between 1933 and 1942, and is no longer maintained by the NPS. The Ribbon Falls spur trail currently varies from 2 feet to 4 feet in width and includes sections of large rocks that must be carefully circumnavigated.

CONTRIBUTING FEATURES:

1. Circulation along the North Kaibab Trail, and connectivity with the Old Bright Angel Trail, Clear Creek Trail, and the South Kaibab Trail
2. Connectivity of use areas such as the North Rim, Roaring Springs Day Use Area, Roaring Springs Residence, Cottonwood Campground, Phantom Ranch, and Bright Angel Campground

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Trail segments reconstructed after the period of significance
2. Secondary access trails to restroom buildings and scenic viewpoints constructed after the period of significance
3. Circulation across the ca. 1960s bridges

YAKI POINT (SOUTH KAIBAB TRAILHEAD) LANDSCAPE AREA

Circulation systems within the Yaki Point (South Kaibab Trailhead) Landscape Area include those for both pedestrian and vehicle use. Vehicular access to the area is provided by Yaki Point Road, which originates at South Rim Drive and terminates at a looped parking. The parking area, which is now restricted from public use, serves as a drop-off point for NPS shuttles carrying day hikers and backpackers. The parking lot is bordered by a concrete sidewalk, which also provides access to a waterless restroom building located near the center of the site. South of the parking area, a dirt road extends west from Yaki Point Road and provides access to the Fred Harvey and NPS Residences, as well as other administrative buildings located near the southeast corner of the landscape area. In some locations, gravel driveways extend from the road and function as off-road parking areas for vehicles. The road continues to the southeast where it terminates at the Mule Shelter and Corral and the Harvey Residence Shed. The circulation patterns created by these features—Yaki Point Road, the parking area, and dirt access road—are similar to those utilized in the historic period and are therefore considered to be contributing features of the Yaki Point (South Kaibab Trailhead) Landscape Area. The concrete sidewalk around the perimeter of the parking area is of modern construction and is considered a non-contributing feature.

The primary means of pedestrian circulation through the Yaki Point (South Kaibab Trailhead) Landscape Area is the South Kaibab Trail. The trailhead is accessed by a wide, stone-edged and paved pathway that originates at the western edge of the parking area. The pathway terminates into a large open area that contains an informational kiosk and an emergency phone, and continues down a flight of stone steps to the main trail alignment. Circulation patterns associated with the South Kaibab Trailhead are considered to be contributing to the Yaki Point Landscape Area.

CONTRIBUTING FEATURES:

1. Yaki Point Road
2. Yaki Point parking area
3. Circulation at the South Kaibab Trailhead

NON-CONTRIBUTING FEATURES:

1. Concrete sidewalk spanning the edge of the parking lot

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Ancillary dirt footpaths to buildings and structures
2. Gravel driveways and parking areas associated with administrative buildings in the southeast portion of the landscape area

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

The primary means of circulation through the Bright Angel Campground Landscape Area is a 4 foot to 5 foot wide arterial footpath with a dirt and sand tread. The footpath extends from a spur trail near Rock House Bridge north to an unnamed bridge that crosses Bright Angel Creek and connects to the North Kaibab Trail. The campsites are clustered on either side of the footpath, providing connectivity to each site. The footpath also links backpackers and hikers with adjacent portions of the Phantom Ranch Landscape Area, which abut the campground to the south and east. The circulation that the existing arterial footpath provides to the Rock House Bridge is similar to that of the period of significance. However, the circulation to the north over the unnamed bridge was added to the Bright Angel Campground Landscape Area outside the District's period of significance.

CONTRIBUTING FEATURES:

1. Circulation provided to the Rock House Bridge

NON-CONTRIBUTING FEATURES:

1. Circulation to the north over the unnamed bridge

COTTONWOOD CAMPGROUND LANDSCAPE AREA

The primary circulation corridor of the Cottonwood Campground Landscape Area is provided by the North Kaibab Trail. The trail has functioned as the main thoroughfare through the campground since its establishment by the NPS in 1928. Buildings and structures associated with visitor use, such as a water spigot, information kiosk, and waterless restroom facility, are located on both sides of the trail near the center of the site, and the Ranger Residence and other administrative buildings are located at its northern and southern ends. The portion of the trail that passes through the campground is edged with a single course of native stone. Short dirt footpaths extend from the main trail alignment and connect to the campsites and other developed areas of the landscape area. The current circulation system reflects modifications that were made to the landscape as a result of NPS improvement projects. These projects, which were completed by the NPS in response to flash flooding along Bright Angel Creek, removed most if not all of the historic circulation system that was present at the campground during the District's period of significance.

CONTRIBUTING FEATURES:

1. North Kaibab Trail

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Ancillary dirt footpaths to buildings and camp sites

ROARING SPRINGS LANDSCAPE AREA

Circulation patterns at Roaring Springs reflect both the modern and historic uses of the landscape area. The Roaring Springs Landscape Area is located along the North Kaibab Trail and consists of three discontinuous areas of development. The northernmost of these areas is referred to as the Day Use Area and includes a composting toilet and picnic area. Other small-scale features, such as a water spigot and mule hitching posts, are also provided in the area for the convenience of hikers and mule riders traveling along the North Kaibab Trail. Although the buildings and small-scale features located within this area are of recent construction, the

marked spur trail (known as the Roaring Springs spur trail) which serves as the primary circulation corridor for this portion of the landscape area dates to the period of the significance. The tread of the spur trail consists of dirt and loose gravel. Erosion control devices, including stone water bars and steps, are placed perpendicular to the alignment to hold soil in place and/or facilitate drainage. Stacked stone retaining walls are also present in some areas on the upslope side of the trail to support the steep canyon walls (Photograph 73).

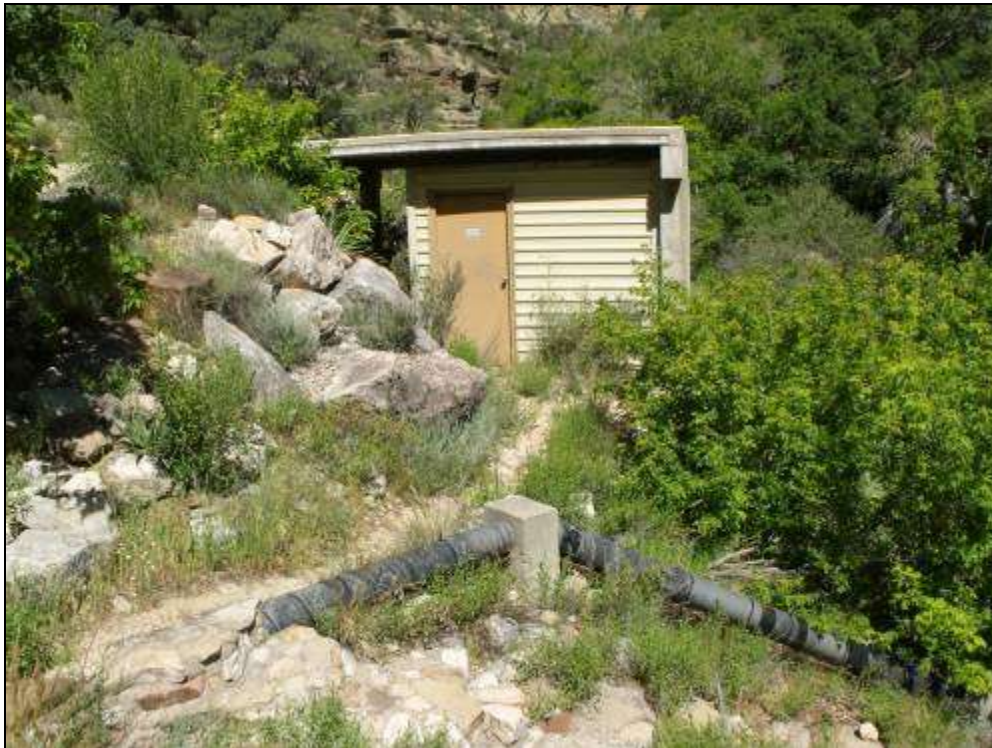


Photograph 73. Roaring Springs spur trail at its junction with the North Kaibab Trail, facing north, 2011. Source: LSD.

The Pumphouse Area is currently accessed by a primitive and unmarked dirt spur trail that originates from the North Kaibab Trail approximately 0.2 miles southeast of the Day Use Area. The trail skirts the steep slopes of the southwestern side of Roaring Springs Canyon. The trail, which serves as the only footpath to the area, was predominantly used by Pumphouse operator Bruce Aiken in the late 1960s to access facilities associated with the Trans-canyon Water System. Much like other developed areas within the District that are situated along Bright Angel Creek, recurrent flooding has destroyed many of the original structures related to the Trans-canyon Water System and the majority that remain have been modified or rebuilt.

Additionally, the secondary circulation systems within the area, which currently consist of narrow, stone-edged dirt paths and concrete and stone steps are also of modern construction (Photograph 74).

The Roaring Springs Pumphouse Operator's Residence is located at the southernmost extent of the landscape area. Due to its restroom facilities, potable water source, and shaded location along the east bank of Bright Angel Creek, this area has historically served as a resting place for backpackers and recreationists travelling along the North Kaibab Trail. The largest building in the area, the Pumphouse Operator's Residence, is accessed by a dry-laid flagstone sidewalk and two sets of stone steps that originate in an open dirt area immediately adjacent to the North Kaibab Trail (Photograph 75). This area, which contains the water spigot and



Photograph 74. Narrow dirt footpath and stone stairs present within the Roaring Springs Pumphouse Area, facing north, 2011. Source: LSD.



Photograph 75. Stone steps and flagstone pathway in the vicinity of the Roaring Springs Pumphouse Operator's Residence, facing north, 2011. Source: LSD.

numerous large boulders on which to sit, is the area most commonly used by the visitors. A third flight of stone steps with a metal railing is situated to the east of the sidewalk and provides additional access to the building. Secondary circulation systems within this area include a number of primitive dirt-lined paths with associated stone steps that provide access to modern facilities situated to the north of the residence and along the west bank of Bright Angel Creek. Additionally, a concrete sidewalk extends from the main elevation, or eastern façade of the building, to a modern helipad/storage building on the creek bank. Historic photographs of this area confirm that circulation patterns within the Pumphouse Residence Area of Roaring Springs dating to the period of significance are no longer retained. As with other features of the Roaring Springs Landscape Area, this loss of integrity is largely due to the recurrent flooding of Bright Angel Creek.

CONTRIBUTING FEATURES:

DAY USE AREA

1. North Kaibab Trail
2. Roaring Springs spur trail
3. Stone steps, retaining walls, and water bars along the Roaring Springs spur trail

PUMPHOUSE AREA

1. North Kaibab Trail

PUMPHOUSE OPERATOR'S RESIDENCE AREA

1. None identified

NON-CONTRIBUTING, COMPATIBLE FEATURES:

DAY USE AREA

1. None identified

PUMPHOUSE AREA

1. Informal footpaths connecting Trans-canyon Water System facilities
2. Unnamed spur trail leading from the North Kaibab Trail to the Pumphouse
3. Stone steps

PUMPHOUSE OPERATOR'S RESIDENCE

1. Stone steps leading to Pumphouse Residence
2. Flagstone pathway adjacent to stone steps
3. Informal footpaths leading from the Pumphouse Residence to facilities located to the north and along the west bank of Bright Angel Creek

4. CLUSTER ARRANGEMENT:

The most visible patterns of clustering within the Cross Canyon Corridor Historic District result from the natural and geological constraints of the canyon. Built features are generally clustered at extreme transverse elevational changes (i.e., switchbacks, cliff/ledge faces), major or minor plateaus (i.e., the Tonto Plateau, ridge lines), and riparian areas or floodplains. Native stone and wood features are often necessary for trail stabilization and include retaining walls, steps, trail edging, and erosion-control measures. These are often clustered at switchbacks and exposed cliffs or ledges. Level plateaus and riparian areas are scarce along the Cross Canyon Corridor, and as a result, buildings are clustered in the rare suitable locations such as Indian Garden, Phantom Ranch, Yaki Point (South Kaibab Trailhead), and Cottonwood Campground.

Clustering of campsite areas and cabin areas is also common within campgrounds. These sites are often connected by secondary trails. The campsites and cabins are also generally clustered around restrooms and water facilities.

As expected, the construction of a built environment also influences the natural “clustering of people.” Within the Cross Canyon Corridor Historic District, clustered buildings and structures provide gathering areas for respite and scenic viewing—attracting groups of visitors. Clustering of hikers and mule trains along the trails are also a common occurrence (Photograph 76). Hikers often move along the trail in groups of two or more, and cluster at overlooks along the trail to rest, drink water, and enjoy the spectacular canyon views.



Photograph 76. Cedar Ridge rest area, 2011. Source: LSD.

Additionally, long trains of mules evoke iconic historical images of the canyon and its use as a transportation and recreation corridor.

The following section provides a discussion of cluster arrangement as it relates to the unique layout of buildings and structures within each of the ten landscape areas that comprise the District.

BRIGHT ANGEL TRAIL LANDSCAPE AREA

The most visible pattern of clustering within the Bright Angel Trail Landscape Area is largely a response to the natural, geological environment of the canyon. Built features are clustered at extreme elevational changes (i.e., switchbacks and cliff/ledge faces), major or minor plateaus (i.e., the Tonto Plateau, ridge lines), and riparian areas or floodplains. The use of native stone features, such as retaining walls, steps, trail edging, and pavement at switchbacks and along cliffs and ledge faces, is needed for trail stabilization, reinforcement, protection, and safety, and reinforces the linear form of the trail alignment (Photograph 77). Developed areas situated along the trail, including Indian Garden, Phantom Ranch, and the One-and-a-Half-Mile, Three-Mile, and Pipe Creek Rest Houses require a larger footprint and are therefore located on plateaus or within riparian floodplains to minimize impacts to the natural terrain.



Photograph 77. Native stone and wood features used for trail stabilization, 2011. Source: LSD.

As expected, there is a direct correlation between the construction of a built environment and the natural “clustering of people” that these features create. Within the Bright Angel Trail Landscape Area, clustered buildings and structures provide gathering areas of respite and/or Grand Canyon viewing of which users have traditionally availed themselves.

CONTRIBUTING FEATURES:

1. Groupings of trail features in areas of extreme elevational change, along major or minor plateaus, and within riparian areas or floodplains that were built during the period of significance

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Clusters of built features constructed post period of significance

INDIAN GARDEN LANDSCAPE AREA

Landscape features and systems for Indian Garden are also arranged within distinct cluster patterns. Six different areas within Indian Garden exhibit a distinct coherent identity and land use. Clusters within Indian Garden include the Administration Area, Campground Area, Day Use Area, Pump Station and Corral Area, North Indian Garden Area, and Bright Angel Trail Corridor. The Administration Area, consisting of the ranger residence and maintenance facilities, is located in the southernmost portion of Indian Garden. The Campground Area is

located north of the Administration Area and consists of camp sites and comfort stations. North of this area is the Day Use Area consisting of the SAR Cache, Rock House, and groups of picnic tables. Visitor use and park maintenance of this area has been limited due to excessively wet conditions and potential endangerment of the Niobrara ambersnail habitat. The Pump Station and Corral Area contain mule facilities and pump station buildings and is located north of the Day Use Area. The North Indian Garden Area contains dense vegetation, the Kolb Studio ruin, the Rehandling Pump House, and other Cameron-era resources. The Bright Angel Trail Corridor and Garden Creek border the Administration Area and campground to the east. Of these, only the Bright Angel Trail Corridor and North Indian Garden Area retain integrity and broader cluster arrangement.

CONTRIBUTING FEATURES:

1. Clusters of development within the Bright Angel Trail Landscape Area and North Indian Garden Area

NON-CONTRIBUTING FEATURES:

1. Clusters of development within the Administration Area, Campground Area, Day Use Area, Pump Station and Corral Area

COLORADO RIVER TRAIL LANDSCAPE AREA

The Colorado River Trail functions as a connector trail for the Bright Angel Trail and the South Kaibab Trail, both of which originate on the South Rim and terminate at the Colorado River. The trail traverses a narrow shelf above the Colorado River that was hewn from the adjacent canyon wall by the CCC using air-powered tools and explosives. As such, the only building associated with the trail—a waterless restroom facility—is located at its trailhead near the mouth of Pipe Creek. Other structures associated with the trail include native stone retaining walls and the Silver Bridge, which crosses the Colorado River near the eastern terminus of the trail. While the location of the retaining walls along the trail route is a direct result of the natural and geological environment through which the trail traverses, the site of the Silver Bridge was determined by the construction of the pipeline for the Trans-canyon Water System, which is currently anchored beneath it.

CONTRIBUTING FEATURES:

1. Groupings of trail features, such as native stone retaining walls, along the length of the Colorado River Trail
2. Clustering of features related to the Trans-canyon Water System at the Colorado River

SOUTH KAIBAB TRAIL LANDSCAPE AREA

The South Kaibab Trail Landscape Area contains several features and nodes of development which form distinct areas of clustering along the trail. The trail's features create a user-friendly environment, which provides access to these cluster areas as well its built features, such as its native stone retaining walls and steps.

The areas of clustering along the South Kaibab Trail are consistently associated with developed areas or overlooks. Developed areas include the Yaki Point (South Kaibab Trailhead) Landscape Area (which is discussed further below), Cedar Ridge, and the Tip-off. Both Cedar Ridge and the Tip-off are situated on ridge tops in areas that are conducive to the visitor experience. Each of these areas is bisected by the main trail alignment and contains composting toilets, mule hitching bars, and other structures and small-scale features related to pack train and visitor use. Additionally, clustering also occurs at overlooks located along the trail alignment, such as Ooh Aah Point, Skeleton Point, and Panorama Point, where backpackers and tourists often pause to take in expansive views of the Colorado River gorge and geological formations of the canyon. Due to their proximity to the South Kaibab trailhead, both Ooh Aah Point and Cedar Ridge serve as turnaround points for many hikers and tourists not continuing further along the trail.

CONTRIBUTING FEATURES:

1. Clusters of developed areas or overlooks including Yaki Point (South Kaibab Trailhead), Cedar Ridge, The Tip-off, Ooh Aah Point, Skeleton Point and Panorama Point

YAKI POINT (SOUTH KAIBAB TRAILHEAD) LANDSCAPE AREA

Cluster arrangement within the Yaki Point (South Kaibab Trailhead) Landscape Area largely reflects the landscape's dual function as a staging area for pack animals as well as the trailhead for the South Kaibab Trail. Buildings and structures at Yaki Point (South Kaibab Trailhead) are clustered into two distinct areas, both of which are located in close proximity to the South Kaibab Trail access road and are interconnected by paths to ease accessibility.

One cluster area at Yaki Point (South Kaibab Trailhead) consists predominantly of modern development associated with visitor use of the South Kaibab Trail. Buildings and structures are clustered around a parking area and include a restroom building, water station, and information kiosk. Although the parking area and road date to the District's period of the significance (Photograph 78), the remaining facilities located within this area were installed after 1942. Clustering within this area effectively concentrates visitor traffic to the northern portion of the Yaki Point (South Kaibab Trailhead) Landscape Area.

The second cluster area consists of buildings and structures built by the Fred Harvey Company and NPS during the landscape's initial development as a mule staging area. This area contains seven buildings that date to the District's period of significance. These include two residences (known as the NPS Residence and Fred Harvey Residence), two sheds, two cisterns, a garage (known as the NPS Garage), and a stone mule barn. These elements are located to the east and south of the South Kaibab Trail in a shaded, level area that is easily accessible from the trailhead, but is distant enough to provide privacy for NPS and Xanterra Parks and Resort staff currently residing in the area. A gravel road, which connects to Yaki Point Road, provides access to area. The buildings and structures are clustered together



Photograph 78. Parking area for the South Kaibab Trailhead at Yaki Point, 2011.
Source: LSD.

along both sides of the road. The residences, cisterns, and garage are located in close proximity to one another near the center of the cluster area, with the pack animal facilities located at either end.

CONTRIBUTING FEATURES:

1. Cluster of modern development associated with visitor use
2. Cluster of Fred Harvey Company and NPS development associated with the mule staging area

NORTH KAIBAB TRAIL LANDSCAPE AREA

The North Kaibab Trail is an important linkage connecting the North Rim with the Colorado River and the South Rim, resulting in a cross-canyon travel corridor. The most visible pattern of clustering within the North Kaibab Trail Landscape Area is largely a response to the natural, geological environment of the canyon. Built features are clustered at extreme transverse elevational changes (i.e., switchbacks and cliff and ledge faces) and riparian areas or floodplains. The use of native stone features—walls, retaining walls, steps, trail edging, and pavement—at switchbacks and cliff and ledge faces is needed for trail stabilization, reinforcement, protection, and safety, and reinforces the linear form of the trail alignment. The most important features are the seven bridges built along the North Kaibab Trail. These provide additional routes for visitors via secondary trails, better entry and exit access to the canyon, and enable visitors to counter the difficulties of the landscape's topographical restraints.

The cluster areas along the North Kaibab Trail are associated with developed areas including Bright Angel Campground Landscape, Phantom Ranch Landscape Area, Cottonwood Campground Landscape Area, Roaring Springs Landscape Area, and the Supai Tunnel. These areas contain buildings or designated visitor areas that create clustering within the landscape areas including administrative, recreational, and water facilities (Photograph 79). These landscape areas and their associated building clusters have been placed along the trail



Photograph 79. Day hikers, backpackers, and mule riders refilling their water at the Supai Tunnel rest area, 2011. Source: LSD.

in areas that are prime viewing areas as well as areas where the topography lends itself to development.

Supai Tunnel, approximately 1.7 miles from the trailhead, is the first formal rest point along the Trail corridor and consists of a restroom building and water spigot. This destination often signifies the turnaround point for many trail users not continuing further along the trail. The other developed areas along the North Kaibab Trail landscape are further discussed throughout this section.

CONTRIBUTING FEATURES:

1. Clusters of development associated with response to the natural, geological environment, extreme transverse elevational changes, and riparian areas or floodplains constructed during the period of significance Clusters of development at Bright Angel Campground, Phantom Ranch, Cottonwood Campground, Roaring Springs, and the Supai Tunnel

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Clusters of development constructed after the period of significance

ROARING SPRINGS LANDSCAPE AREA

Cluster arrangement within the Roaring Springs Landscape Area largely reflects the use of the landscape for recreation and as an administrative facility and utility for the park. Buildings and structures at Roaring Springs are clustered into three distinct areas, with each located east of the North Kaibab Trail. The areas include a Day Use Area, Pumphouse Area, and Residence Area.

The Day Use Area is located in the northern portion of the Roaring Springs Landscape Area, situated downslope from the North Kaibab Trail, and is accessed by an approximately 0.25-mile-long secondary trail. There is a restroom building, emergency telephone, potable water spigot, and a picnic area. This area and the location of its structures are constrained by the natural environment. The picnic areas and restroom facilities were constructed on a level surface that is unique to this part of the landscape area. The proximity of the creek as a reliable water source also influenced the siting of the Day Use Area in this location.

The Pumphouse Area consists of the Roaring Springs Pumphouse, water intake structure, and a helicopter pad. It is located southeast of the Day Use Area, below the North Kaibab Trail, and is accessed by a secondary trail that measures approximately 0.25 mile long. The Pump House Area is crucial to the function of the water system that was originally built in 1928 and refurbished in the 1960s. Similar to the Day Use Area, the Pump House Area is located in close proximity to a reliable source of water.

The Residence Area consists of the Roaring Springs Residence, a second helicopter pad, and a shed. It is located at the far southern end of the Roaring Springs Landscape Area, adjacent to the North Kaibab Trail. This is the administrative section of the Roaring Springs Landscape Area and its convenient location along the North Kaibab Trail allows the pump house operator and visitors easy access to facilities and structures of the Landscape Area.

CONTRIBUTING FEATURES:

1. Clusters of development including the Day Use Area, Pumphouse Area, and the Pumphouse Operator's Residence Area

COTTONWOOD CAMPGROUND LANDSCAPE AREA

The Cottonwood Campground serves as a layover destination along the North Kaibab Trail as it marks the halfway point between the Bright Angel Campground near Phantom Ranch and the North Kaibab Trailhead. The level campground area is constrained by the east bank of Bright Angel Creek and the canyon walls. Buildings and campsites are situated along the east

and west sides of the North Kaibab Trail, with a helicopter pad and mule stock camp site the only features sited away from the trail.

A ranger station is situated at the south end of the area and is the first feature encountered when entering the campground from the south. There is also a secondary trail that connects with the helicopter pad. There is a storage building, restroom building, and kiosk to the north of the ranger station, along both sides of the North Kaibab Trail (Photograph 80). A large group camp site is also located nearby, southeast of the trail. The small group camp sites are clustered in an area along both sides of the trail, north of the kiosk and south of a wash that crosses the Landscape Area. North of this wash is a mule corral, storage building, and mule stock camp site.



Photograph 80. Cottonwood Campground Ranger Station, 2011. Source: LSD.

CONTRIBUTING FEATURES:

1. Clusters of development adjacent to the Cottonwood Campground Ranger Station and Bright Angel Creek, and within the camp site area

PHANTOM RANCH LANDSCAPE AREA

Phantom Ranch contains two cluster areas along the north side of the Colorado River and Bright Angel Creek. The northern portion is a concession area and the southern portion is an administrative area on the Bright Angel Creek Delta. The North Kaibab Trail extends through the center of the concession area and crosses the north edge of the administrative area. Secondary trails connect the administrative area with the North Kaibab Trail. Both areas are constrained by the natural environment, and all of the structures are located on a fairly level surface that defines the limits of the landscape area.

The concession area represents the initial development of Phantom Ranch by Colter in 1922. This area is bound on the east by the canyon wall and the west by Bright Angel Creek. There is a cluster of cabins, laundry facilities, showers, and sheds facing the central dining hall. The cabins are arranged in groups along both sides the North Kaibab Trail, whereas the dining hall

is along the west side (Photograph 81). Peripheral structures consist of a reservoir, guide cabin, amphitheater, and welcome corral. Located a short distance south of the amphitheater, east of the North Kaibab Trail and separate from the guest areas, is a ranger station and a trail crew bunkhouse. Near the south edge of the concession area and a short distance east of the North Kaibab Trail is a mule corral and the Harvey Mule Barn.



Photograph 81. Phantom Ranch visitor cabins along east side of Landscape Area, 2011. Source: LSD

The Bright Angel Creek Delta represents an administrative cluster area bordered on the south by the Colorado River and the north by the canyon walls. The administrative structures and facilities are clustered in the west edge of the area, west of Bright Angel Creek, and a kiosk represents the only structure in the eastern portion of the delta. Bright Angel Pueblo and the Rees B. Griffith Grave Site are located along the North Kaibab Trail near Black Bridge. A secondary trail extends south of the North Kaibab Trail and provides access to the River Ranger Station, the sewage treatment plant, the NPS Mule Corral, and other administrative buildings. This trail continues to Silver Bridge and crosses the Colorado River.

CONTRIBUTING FEATURES:

1. Clusters of development within the northern concession area and southern Bright Angel Creek Delta

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

The Bright Angel Campground is located within the inner canyon along the west bank of Bright Angel Creek. The campsites, the CCC-constructed comfort station, and the Adirondack shelter are adjacent to Phantom Ranch and west of the North Kaibab Trail. The campground serves as a destination for hikers, and the campsites are arranged to maximize privacy. The level campground area is constrained by the west bank of Bright Angel Creek and the canyon walls. A secondary trail branches from the North Kaibab Trail and crosses a bridge at the north end of the landscape area, reconnecting with the North Kaibab Trail by way of the Rock House Bridge at the south end. The restroom facility is centrally located within the campground, and the Adirondacks Shelter is located in the southern portion of the campground.

CONTRIBUTING FEATURES:

1. Clusters of development along the west bank of Bright Angel Creek and adjacent to the secondary trail that serves as the campground's main footpath

5. CONSTRUCTED WATER FEATURES:

The majority of the constructed water features within the Cross Canyon Corridor Historic District were built in association with water usage needs on the Grand Canyon's North and South Rims. In 1928, the Utah Parks Company and UPRR began construction on a water pipeline from Roaring Springs to the North Rim. Although most of the infrastructure associated with this early water conveyance system was damaged by flooding and was subsequently replaced in the 1960s during construction of the existing Trans-canyon Water System, a remnant section of the UPRR cable tramway system remains in the Day Use Area of the Roaring Springs Landscape Area (see Photograph 67). The cable tramway was built to facilitate the transport of materials and equipment during construction of the original water conveyance system.

Between 1931 and 1932, the SFRR built a second water conveyance system. This system, which stretched from Indian Garden to the South Rim, was incorporated into the existing Trans-canyon Water System between 1965 and 1970. Continuous repairs have been made to the water system since its initial construction. Additionally, in 1985, the pipeline from Indian Garden to the South Rim was upgraded from 6-inch-diameter pipe to an 8-inch-diameter pipe due to increasing water usage on the South Rim.

As the existing Trans-canyon Water System generally follows the alignment of the four Cross Canyon Corridor trails, at numerous locations within the trail corridors, as well as within the trails' treads, the physical constraints of the canyon have resulted in the exposure of the pipeline and its associated standpipes (Photograph 82). Additionally, in other locations, the pipeline is supported by native stone piers, all of which were built between 1965 and 1970 as part of the Trans-canyon Water System, and at the Colorado River, the pipeline is anchored beneath the deck of the Silver Bridge (see Photograph 32). The rusticated pipeline and standpipes, as well as the post period of significance native stone support piers blend well with the canyon's natural aesthetic and mimic other structures within the park that are built in the NPS Rustic architectural style.

The current Trans-canyon Water System also provides potable water to numerous locations within the developed areas of the Cross Canyon Corridor Historic District. Water spigots located at the numerous locations within Indian Garden and Phantom Ranch, as well as along the Bright Angel Trail at the One-and-a-Half-Mile, Three-Mile, and River Rest Houses; near the parking area at the Yaki Point (South Kaibab Trailhead) Landscape Area; near the restroom building at the Bright Angel Campground; adjacent to the campsites at the Cottonwood Campground (Photograph 83); along the North Kaibab Trail at Supai Tunnel; and near the restroom building and Pumphouse Operator's Residence within the Roaring Springs Landscape Area, are key locations for hikers travelling within the corridor, as the amounts of water carried must be well planned in the arid environment of the canyon. All of the water spigots are considered to be non-contributing structures of the Cross Canyon Corridor Historic District as they were constructed after 1942 in association with the existing Trans-canyon Water System.

In addition to features associated with the Trans-canyon Water System, four constructed water features were documented within the Cross Canyon Corridor Historic District—two of these are located within the Yaki Point (South Kaibab Trailhead) Landscape Area and two are situated within the concession area at Phantom Ranch. The water features at Yaki Point



Photograph 82. Exposed pipeline of the Trans-canyon Water System visible along the North Kaibab Trail, facing east, 2011. Source: LSD.



Photograph 83. Drinking water spigot adjacent to the campsites at Cottonwood Campground, facing north, 2011. Source: LSD.

include the Harvey Residence Cistern (#57307) and a cistern (#57306) associated with the Harvey Mule Barn and Corral. The Harvey Residence Cistern is constructed of stone and concrete and measures 5.5 feet high and 8 inches in diameter (see Photograph 51). The structure is located on a slope behind the residence and does not appear to be in use.

The second cistern is present to the east of the Harvey Mule Barn and is situated parallel to the barn wall. The cistern consists of a 22-foot-long by 8-foot-wide by 6-foot-high rectangular concrete structure that is faced with stone (Photograph 84). Although the exact date of the structure is unknown, it appears to be contemporaneous with the mule barn.

The constructed water features at Phantom Ranch include an irrigation system in the northern portion of the ranch, and a small pond and waterfall behind Guest Cabin No. 11 (Photograph 85). The irrigation system consists of a meandering network of irrigation ditches and pipes that run through the concession area within the Phantom Ranch Landscape Area in a north-south direction, paralleling the North Kaibab Trail in some areas (Photograph 86). Valve boxes and pipes connect from the ditches to newly planted trees within the landscape area. Many of these irrigation ditches reflect work done by long-term seasonal employee, Sjors (last name unknown), over the “last 20-plus years” to support vegetation (personal communication, Ellen Brennan, 28 June 2012). However, the practice of using irrigation



Photograph 84. Rectangular stone cistern to the east of the Harvey Mule Barn, facing southwest, 2011. Source: LSD.



Photograph 85. Small pond and waterfall to the north of Guest Cabin No. 11, facing east, 2011. Source: LSD.



Photograph 86. Earthen irrigation ditch in the vicinity of Guest Cabins No. 10 and 11 at Phantom Ranch, facing southwest, 2011. Source: LSD.

ditches to water vegetation at the ranch dates to the period of significance. The date of the small pond and waterfall is also unknown; however, it appears that the feature was constructed by damming running water from the irrigation ditches.

One additional constructed water feature within the Phantom Ranch Landscape Area—an irregularly-shaped swimming pool originally located in a boulder-filled floodplain to the north of the Recreation Hall (#55561)—is no longer present (see Photograph 17; Photograph 87). The pool was constructed by a crew of 20 CCC enrollees between 1934 and 1936. The pool, which measured approximately 35 feet by 70 feet in size and was fed by water from Bright Angel Creek, was a centerpiece of the ranch until 1972, when it was filled in by the Fred Harvey Company due to maintenance and health concerns (Cleeland 1986, 47; Anderson 1998; Kuehl 1934; Langley 1934a).

BRIGHT ANGEL TRAIL LANDSCAPE AREA

NON-CONTRIBUTING FEATURES:

1. Water spigots at the One-and-a-Half-Mile, Three-Mile, and River Rest Houses

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Portion of original SFRR water system from Indian Garden to the South Rim modified post period of significance
2. Steel pipe from 1985 pipeline improvements
3. Native stone support piers of 1965–1970 Trans-canyon Water System



Photograph 87. Phantom Ranch swimming pool, facing south, date unknown (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

INDIAN GARDEN LANDSCAPE AREA

NON-CONTRIBUTING FEATURES:

1. Numerous water spigots at Indian Garden
2. Water fountains in Campground, Day Use, and Pump Station Areas

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Portion of original SFRR Water System from Indian Garden to the South Rim modified post period of significance
2. Steel pipe from 1985 pipeline improvements
3. Native stone support piers of the 1965–1970 Trans-canyon Water System

YAKI POINT (SOUTH KAIBAB TRAILHEAD) LANDSCAPE AREA

CONTRIBUTING FEATURES:

1. Harvey Residence Cistern (#57307)
2. Cistern (#57306) to the east of the Harvey Mule Barn and Corral

NON-CONTRIBUTING FEATURES:

1. Water spigot station near the parking area

NORTH KAIBAB TRAIL LANDSCAPE AREA

NON-CONTRIBUTING FEATURES:

1. Water spigot at Supai Tunnel
2. Trans-canyon Water System (ca. 1965–1970)

ROARING SPRINGS LANDSCAPE AREA

NON-CONTRIBUTING FEATURES:

DAY USE AREA

1. Water spigot at Roaring Springs Rest Area
2. Trans-canyon Water System (ca. 1965–1970)

PUMPHOUSE AREA

1. Trans-canyon Water System (ca. 1965–1970)

PUMPHOUSE OPERATOR'S RESIDENCE AREA

1. Water spigot at the Pumphouse Operator's Residence
2. Trans-canyon Water System (ca. 1965–1970)

NON-CONTRIBUTING, COMPATIBLE FEATURES:

DAY USE AREA

1. Remnant portions of original UPRR water system from Roaring Springs to the North Rim replaced/modified post period of significance

PUMPHOUSE AREA

1. Remnant portions of original UPRR water system from Roaring Springs to the North Rim replaced/modified post period of significance

PUMHOUSE'S OPERATOR'S RESIDENCE

2. Remnant portions of original UPRR water system from Roaring Springs to the North Rim replaced/modified post period of significance

COTTONWOOD CAMPGROUND LANDSCAPE AREA

NON-CONTRIBUTING FEATURES:

1. Water spigot near campsites
2. Water spigot in front of the Ranger Residence (#9441)
3. Trans-canyon Water System (ca. 1965–1970)

PHANTOM RANCH LANDSCAPE AREA

NON-CONTRIBUTING, COMPATIBLE FEATURES:

CONCESSION AREA

1. Irrigation system

NON-CONTRIBUTING FEATURES:

CONCESSION AREA

1. Water spigots in various locations
2. Small pool and waterfall

BRIGHT ANGEL CREEK DELTA

1. Water spigot near Boat Beach

MISSING FEATURES:

CONCESSION AREA

1. Phantom Ranch swimming pool

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

NON-CONTRIBUTING FEATURES:

1. Water spigot near restroom building

6. CULTURAL TRADITIONS:

The Cross Canyon Corridor Historic District is rich in cultural traditions. For the Bright Angel and North Kaibab Trail Landscape Areas, these traditions began with the Archaic, Ancestral Puebloan, and Cohonina occupation of the canyon from 10,000 BC to AD 1150 and continued with the traditions of historic populations of Cerbat, Havasupai, Hualapai, Paiute, Hopi, Zuni, Navajo, and Yavapai Apache until the 1860s. The Hualapai and Havasupai continue to reside and utilize the canyon in the present day.

Archeological evidence suggests that Archaic period populations predominantly utilized the South Rim, which may partly be attributed to the higher diversity of resources in this area. Archaic groups also used caves and rock shelters for campsites and religious purposes, as evidenced by the recovery of split willow twig animal figures and the presence of petroglyph and pictograph galleries, including those visible along the Bright Angel Trail at Mallery's Grotto (Collette et al. 2009, 14; Effland, Euler and Jones 1981, 13; Fairley 2003; Schwartz 1989, 20; Sutphen 1992a).

Beginning in AD 800, the Puebloan and Cohonina peoples utilized all areas of the Grand Canyon and exploited a wide variety of canyon resources. They hunted many animal species and mined mineral pigments and salt from the inner canyon. Unlike the Puebloan peoples, who exploited seasonal resources but led a predominantly sedentary existence, the Cohonina lifeway was characterized by seasonal movement among different locales. Both groups also practiced agriculture and cultivated numerous crops including beans, maize, cotton, and squash (Wright 2009). They also built granary structures from stone, wood, and mud mortar that were utilized for the storage of surplus grain. They constructed small stone check dam alignments that captured alluvial soils and retained moisture while also reducing frost damage to spring seedlings (Babbitt 1978, 178-179; Collette et al. 2010; Coulam n.d., 16; Hughes 1967, 8). Many of these structures have been recorded by NPS archaeologists, particularly in the vicinity of the Bright Angel Trail and Indian Garden. After AD 1150, Cohonina cultural remains are no longer evident in the inner canyon or on the Coconino Plateau. Although the archeological evidence indicates that by the mid thirteenth century Ancestral Puebloan peoples no longer inhabited the area on a full-time basis, their descendants continued to use the area seasonally to exploit mineral, salt, and plant resources (Fairley et al. 1991, 193-195; Schwartz 1989; Sutphen 1992a).

During the late prehistoric (AD 1300–1540) and historic periods (post 1540), the Grand Canyon region was inhabited by Cerbat (likely ancestors of the Hualapai and Havasupai Tribes) and Southern Paiute groups. The Cerbat primarily inhabited the same areas as the Cohonina and their economy was heavily oriented around hunting and gathering. The Havasupai lived intermittently at Indian Garden well into the 20th century. They established irrigated agricultural fields, collected agave and other wild plant resources, and lived in brush wickiups. The semi-nomadic Southern Paiute seasonally occupied the area along the North Rim of the canyon. The historic Hualapai practiced semi-sedentism, wintering at more permanent sites on or adjacent to the rim and spending planting and harvesting seasons

within the Grand Canyon and tributary canyon bottomlands (Bratz 2003; Effland, Jones, and Euler 1981, 43-44; Euler 1972; Fairley et al. 1991, 110-111; Hughes 1967, 11; Hughes 1978, 14; Hurst 2006; Martin 1985; Schwartz 1983; Schwartz 1989, 43-47; Sutphen 1992a; Whitney 1982, 41).

All of these groups used informal routes and trails that linked the canyon rims with the Colorado River. These trails led to well-known natural resource locations and irrigated gardens and fields located in minor canyons. The trails undoubtedly facilitated regular interaction between these groups. It is known that the Hopi maintained active trade relationships with both the Paiute and Havasupai (Anderson 2002a, 3; Wilson 1999). These trade relationships are evident by the presence of peach, apricot, and fig trees within the inner canyon area, which were planted by the Havasupai in the 18th century. These types of trees were also planted by the Euro-Americans at Indian Garden and Phantom Ranch during the early 1900s, many of which still survive or have naturalized.

Native American occupation of the inner canyon continued until the late 19th century when early prospectors and miners encroached on the canyon in search of valuable minerals in the vicinity of Indian Garden and the Tonto Plateau. In the 1880s, President Hayes established the Havasupai Indian Reservation which consisted of 580 acres of land within the canyon. For 93 years, the Havasupai were confined mostly to the canyon, which led to their increased reliance on agriculture and tourism. The Havasupai practiced agriculture in the summer within the canyon and would perform hunting and gathering on the plateau during the winter.

In 1975, the U.S. Government set aside 188,000 acres for the Havasupai in Havasu Canyon, which shares a boundary with the Grand Canyon. Today, the Tribe raises horses and provides tourist services into Cataract Canyon (Schwartz 1983), while maintaining an allocation of 95,000 acres of land within the boundaries of the park for their permanent use (Hirst 2006; Schwartz 1983).

Following confinement of the Havasupai to the reservation, a second phase of cultural traditions related to Euro-American mining activity at the canyon began. The Bright Angel Trail and Indian Garden Landscape Areas were pivotal in the development of early mining enterprises at the canyon. Niles and Ralph Cameron are credited with the initial development of the Bright Angel Trail (originally known as the Bright Angel Toll Road), which was built to accommodate pack animals with mining supplies and tools. The Bright Angel Trail corridor quickly became the traditional route for prospectors, miners, and cattlemen into the canyon.

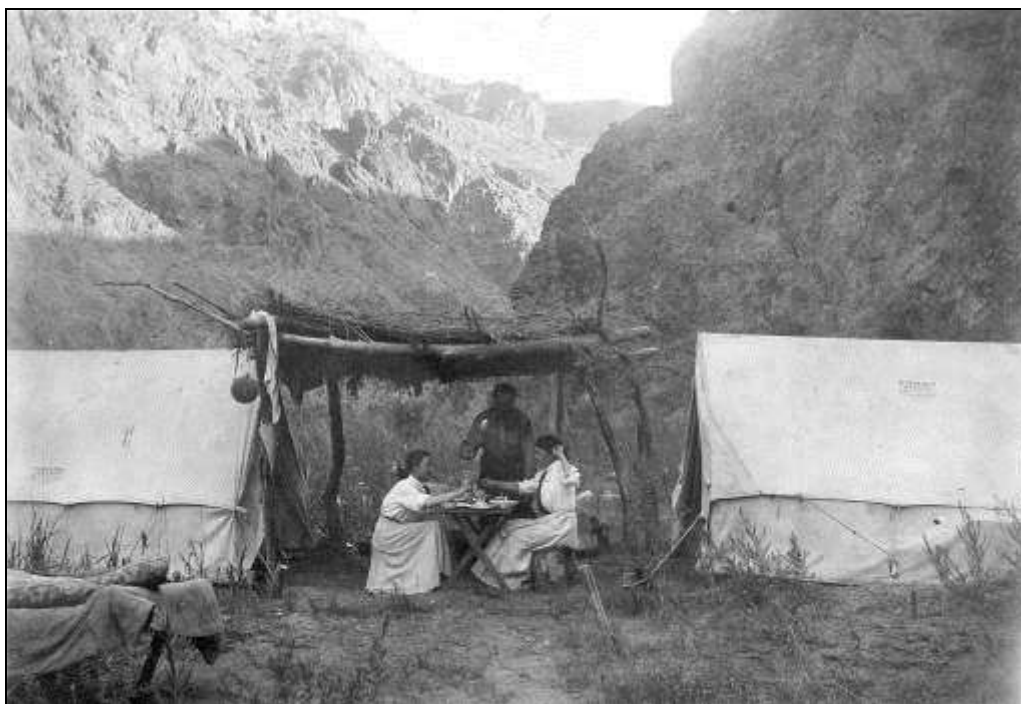
By 1892, the cultural tradition of tourism was quickly replacing the once dominant cultural tradition of mining and industry at the South Rim and at Indian Garden. Tourism was proving to be much more successful than the canyon's mining activities. Ralph Cameron himself recognized this and he continued to develop tourist facilities to supplement his prospecting and mining activities. In 1928, he deeded his holdings to the federal government. Many of the plants—including those established by the Native Americans mentioned above—including cottonwoods, willow, redbud, grapes, and vegetables—were used by Cameron to support camp-life for tourists at Indian Garden and still exist today.

Iconic images of early tourist enterprises at the canyon were captured by photographers Elliot and Emery Kolb, who operated a studio on the South Rim of the Grand Canyon near the Bright Angel trailhead in 1904. The men photographed tourists on their way down the Bright Angel Trail, processed the prints, and made them available for sale in their studio upon the caravan's return to the South Rim. In 1906, the Kolb brothers moved their studio to a two-story stone and wood frame building that Emery constructed at Indian Garden. During their tenure at the Grand Canyon, the Kolb brothers produced thousands of photographs of mule caravans traversing the steepest grades of the Bright Angel Trail, and today, their images are among the most iconic and widely-recognized photographs of the Grand Canyon dating to the early 20th century (Anderson 1998, 95).

The initial development of the North Kaibab Trail and Phantom Ranch Landscape Areas by Utah entrepreneur David Rust is also reflective of early tourist activities occurring within the District during the late 1890s and early 1900s. Similar to Cameron's efforts on the South Rim, David Rust attempted to capitalize on the growing mining and tourist industries at the North Rim of the canyon by building a "toll road" or trail that was suitable for livestock. This trail, which stretched from the North Rim to the Colorado River and followed an earlier route developed by USGS surveyor Francois Matthes, was formally constructed by Rust and several laborers between 1903 and 1907. In association with the route, Rust established a primitive tourist camp east of the Bright Angel Creek near the present-day location of Phantom Ranch for hunting parties, prospectors, and tourists (see Photograph 4; Photograph 88), and he also installed a cable car system (later known as Wooley's Tramway) across the Colorado River (see Photograph 3; Photograph 89). Although Rust's tourist camp was ultimately abandoned in 1913, many of the fruit and cottonwood trees planted by Rust for food and shade remain an integral part of the Phantom Ranch landscape today.

The Cross Canyon Corridor Historic District also expresses another period of cultural traditions resulting from NPS acquisition of the Grand Canyon in 1918. This period, which encompasses both the NPS and CCC era at the canyon (1919–1942), characterizes the development of NPS's vernacular approach to park architecture and improvements. It also reflects the CCC's craftsmanship and frugal use of local building materials during the Great Depression.

The early NPS cultural traditions within the Cross Canyon Historic District are best illustrated by the Phantom Ranch Landscape Area, which contains five buildings designed in 1922 by renowned western architect, Mary E. J. Colter. Because the ranch was built to accommodate mule riders, Colter's design recalled other Western guest ranches of this era with its central lodge and scattered guest cabins (Cleeland 1985, 65). Colter's buildings at Phantom Ranch



Photograph 88. Kolb Brothers photograph showing an unidentified man serving a meal to two female guests under an open-air thatch canopy at Rust's Camp, ca. 1907 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).



Photograph 89. Photograph showing patrons crossing the Colorado River on Wooley's Tramway, date unknown (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

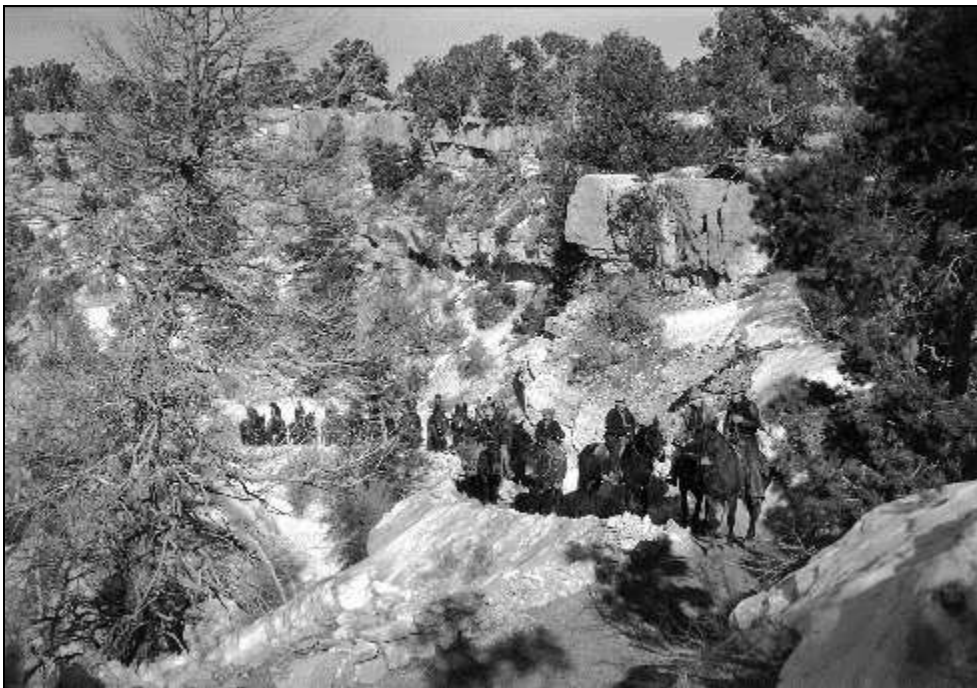
set the precedence for later buildings constructed in the Cross Canyon Corridor, and became the basis of a new architectural style, known as “NPS Rustic,” which became the most popular architectural style employed by the NPS during the 1920s and 1930s.

The Rustic architectural style was also used by the CCC in the mid-1930s to construct trail features and other buildings and structures with site-specific materials that harmonized with their natural surroundings. A number of the CCC-era constructions—including the rest houses along the Bright Angel Trail, the Fossil Fern Exhibit on the South Kaibab Trail, the Caretaker's Residence at Cottonwood Campground, numerous buildings and structures at Phantom Ranch and the Bright Angel Creek delta, and masonry retaining walls and stone steps along the District's four trails—remain intact and evoke this important era of infrastructure and development within the park. Additionally, charge holes visible in numerous locations along the South Kaibab and Colorado River Trails are tangible reminders of the engineering accomplishments of the NPS and CCC during this period of the District's history (Photograph 90).

Lastly, one cultural tradition that spans all three Euro-American phases of canyon development is the use of pack animals (Photograph 91). Once used for practical transport of prospecting and mining supplies and tools, mule trains now transport tourists, luggage, food, beverages, and other supplies to and from Phantom Ranch and Indian Garden (Photograph 92); indeed, the highly visible presence of pack animals on the trails embodies the quintessential “canyon experience.”



Photograph 90. Series of charge holes visible along the South Kaibab Trail, resulting from the trail's construction in 1924–1925, looking west. Source: LSD.



Photograph 91. Mule train traversing the South Kaibab Trail, date unknown (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).



Photograph 92. Mule train traversing the “Dunes” section of the Colorado River Trail, looking north, 2009. Source: LSD.

The development of nearly all of the landscape areas within the Corridor reflects the historic use of mules in the inner canyon. “Cameron’s Trail” was originally widened to accommodate pack animals between 1890 and 1891. The Phantom Ranch Landscape Area was developed as a destination for mule riders, and following its construction in 1922, the Fred Harvey Company began offering the first guided mule trips into the inner canyon along the Bright Angel Trail. These trips, which originally lasted two days and cost \$19, are still offered today by Xanterra, the current concessioner at the park. Development of the Yaki Point (South Kaibab Trailhead) Landscape Area was also directly associated with mule traffic at the canyon and since its establishment in 1926, the area has functioned as a staging area for pack trains delivering supplies throughout the canyon. Additional small-scale features and structures such as hitching bars, water troughs, mule barns, and fenced corrals attest to the importance of pack animal use at the canyon (Photograph 93). These are located at Indian Garden, Phantom Ranch, Bright Angel and Cottonwood Campgrounds, Yaki Point (South Kaibab Trailhead), and along all four trails within the Cross Canyon Corridor.

CONTRIBUTING FEATURES:

BRIGHT ANGEL TRAIL LANDSCAPE AREA

1. Use of the Bright Angel Trail by Native American cultures
2. Use of the Bright Angel Trail associated with mining claims and operations
3. Use of the Bright Angel Trail associated with early private tourist enterprises
4. Continued use of the Bright Angel Trail for tourism
5. Tradition of CCC workmanship and NPS Rustic architecture
6. Pack animal use along the Bright Angel Trail



Photograph 93. Welcome Corral at Phantom Ranch, looking north, 2011. Source: LSD.

INDIAN GARDEN LANDSCAPE AREA

1. Use of Indian Garden by Native American cultures
2. Association of Indian Garden with mining claims and operations
3. Development of Cameron's Indian Garden Camp (ca. 1903)
4. Continued use of Indian Garden for tourism

COLORADO RIVER TRAIL LANDSCAPE AREA

1. Tradition of CCC workmanship
2. Pack animal use along the Bright Angel Trail

PHANTOM RANCH LANDSCAPE AREA

1. Development of Rust's camp (ca. 1906)
2. Continued use of Phantom Ranch as a tourist destination
3. Tradition of CCC workmanship and NPS Rustic architecture
4. Continued reliance on pack animals for the transport of materials and supplies

SOUTH KAIBAB TRAIL LANDSCAPE AREA

1. Continued use of the South Kaibab Trail for NPS access and tourism
2. Tradition of NPS and CCC workmanship and NPS Rustic architecture
3. Pack animal use along the South Kaibab Trail

YAKI POINT (SOUTH KAIBAB TRAILHEAD) LANDSCAPE AREA

1. Pack animal use by the NPS within the Cross Canyon Corridor
2. Tradition of NPS workmanship and NPS Rustic architecture

NORTH KAIBAB TRAIL LANDSCAPE AREA

1. Use of the North Kaibab Trail by Native American cultures
2. Use of the North Kaibab Trail associated with early private tourist enterprises
3. Continued use of the North Kaibab Trail for tourism
4. Tradition of CCC and NPS workmanship and NPS Rustic architecture

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

1. Continued use of the Bright Angel Campground for tourism
2. Tradition of CCC and NPS workmanship and NPS Rustic architecture

COTTONWOOD CAMPGROUND LANDSCAPE AREA

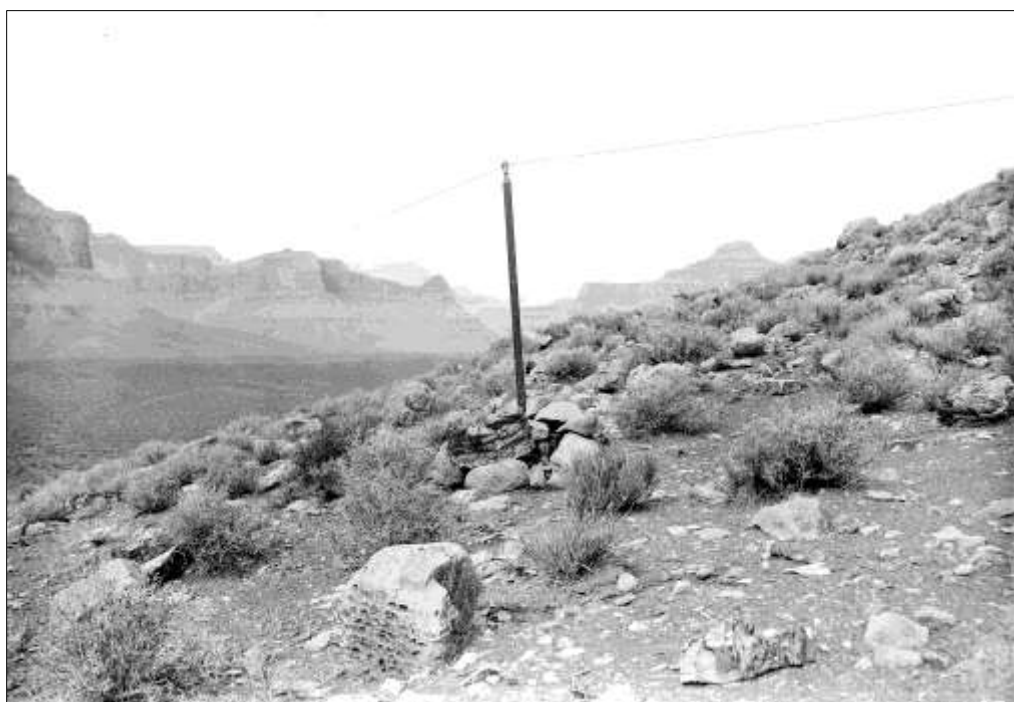
1. Continued use of the Cottonwood Campground for tourism
2. Tradition of NPS workmanship and NPS Rustic architecture

7. LAND USE:

Historically, the Cross Canyon Corridor Historic District functioned as a transportation corridor, both for utilitarian and recreational purposes. Transportation remains the predominant land use for the District today, as its network of trails continues to comprise the only engineered trans-canyon route at Grand Canyon National Park. Although portions of the trails were developed by Native American dwellers of the Canyon, miners, and early entrepreneurs, creation of a trans-canyon transportation corridor was accomplished by the NPS following the completion of the North and South Kaibab Trails in 1928. These two trails, along with the Bright Angel Trail and Colorado River Trail, continue to provide a means for tourists to get from one destination to another and for NPS personnel to travel from the North and South Rims to the inner canyon and Colorado River. Additionally, the South Kaibab Trail continues to provide a direct route for pack animals and wranglers transporting supplies and materials from Yaki Point on the South Rim to the inner canyon and facilities at Phantom Ranch. Originally developed by the NPS and Fred Harvey Company in 1926 as a staging area for mules, Yaki Point continues to serve its historic function as the gateway and preparation area for hikers and mule trains traveling the South Kaibab Trail. The Bright Angel Trail, Colorado River Trail, and North Kaibab Trail also continue to function as transportation corridors for guided mule rides which are offered year-round on the South Rim and from mid-May to mid-October on the North Rim by Xanterra Parks and Resorts.

In addition to serving as transportation corridor for pack animals, park visitors and staff, the District has also functioned as a utility corridor for the Canyon's water and telephone systems both during and after its period of significance. Use of the component landscape as a utility corridor began in 1932, when portions of the Bright Angel Trail and Indian Garden Landscape Areas were developed by the SFRR in association with the construction of a 2.5-mile-long pipeline to transport water from Indian Garden to the South Rim. During this time, the Santa Fe Railway built numerous facilities at Indian Garden including a Pump Caretaker's Residence, Pumphouse, and Rehandling Pumphouse for the purpose of conveying water to the South Rim. In 1965, the Park rebuilt the SFRR water system and extended the pipeline 13 miles to its current terminus at Roaring Springs. At this time, the water line became known as the Trans-canyon Water System and numerous facilities associated with the pipeline were built by the NPS within the Roaring Springs Landscape Area. Also during this time, the NPS constructed masonry piers to elevate the pipeline over the surrounding terrain at creek crossings. Facilities associated with the historic and modern water system remain intact at Indian Garden and Roaring Springs and structures and features associated with the system, including the stone piers, sections of buried and unburied pipeline, and numerous inlets and standpipes, are visible along all of the District's trails and within the remaining landscape areas.

The Trans-canyon Telephone Line (#57227) was initially constructed by the CCC in 1934. That year, CCC enrollees surveyed and cleared right-of-way along the Bright Angel Trail, Colorado River Trail, and North Kaibab Trail for the installation of a trans-canyon telephone line which stretched 25 miles between the North Rim and South Rim of the canyon. The line, which was completed in September 1935, consisted of a single telephone line hung from poles constructed of two-inch galvanized pipe (Photograph 94). In 1938, the existing poles of the telephone line were upgraded and modified by the addition of a second circuit and new cross-arms (Anderson 2002a, 6; Cleeland 1986a; Cleeland 1986b, 54). With the exception of recent repairs, which obliterated a 1.5-mile-long section of the line between Phantom Ranch and the River Rest House in 1982, the telephone line remains intact and its galvanized steel poles are present within all of the landscape areas within the Cross Canyon Corridor Historic District. The construction of the telephone line, as well as the trans-canyon water pipeline, was important to the development of the inner canyon as a tourist destination both throughout and after the District's period of significance.



Photograph 94. Trans-canyon Telephone Line pole supported by rocks on the Tonto Plateau along the South Kaibab Trail, ca. 1935 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

Tourism and recreation as a form of land use has also remained intact both within and after the District's period of significance along the trails and within four of the developed areas of the Cross Canyon Corridor Historic District (Indian Garden, Phantom Ranch, Bright Angel Campground, and Cottonwood Campground). Tourism and recreation, as well as agriculture, are particularly significant uses of the landscape within the Phantom Ranch Landscape Area (Photograph 95), where vestiges of an orchard and alfalfa field originally cultivated by the Fred Harvey Company in the 1920s continue to exist today. Although the orchard no longer produces fruit for visitor consumption and the field has lain fallow for decades, these areas remain an expansive and undeveloped part of the landscape that attest to the agricultural use of the landscape within the District. Fruit trees and cottonwoods planted by Ralph Cameron at Indian Garden are also still evident. Indian Garden, Phantom Ranch and the two campgrounds continue to support tourist and recreational activities in the Park's Colorado River corridor and provide the only formal accommodations for inner canyon tourists and backpackers.



Photograph 95. View of Phantom Ranch, showing the cultivated field and orchards, ca. 1933 (Photograph courtesy of the GRCA Archives, Grand Canyon National Park).

In the years postdating the period of significance, the conjoined land uses of transportation, utility corridor, and recreation/tourism have been expanded to accommodate the increasing number of tourists and provide for visitor comfort and safety. This expansion has led to the addition of numerous buildings and structures within the Phantom Ranch, Cottonwood Campground, Roaring Springs, and Indian Garden Landscape Areas that post-date the period of significance. These include the first aid clinic, formal ranger residence and laundry room, helipad, and maintenance facilities such as the repair shop, trail and maintenance crew bunkhouses, and second pumphouse at Indian Garden; the helipad and storage facilities at Cottonwood Campground; and the Hiker Dorms, laundry room, expanded dining room, amphitheater, SAR cache shed, helibase ramada, and ranger station at Phantom Ranch.

Increased visitation has also led to the installation of telephones and other emergency facilities at the waterless restroom buildings located along the Bright Angel Trail, North Kaibab Trail, and South Kaibab Trail, and at Roaring Springs.

Additionally, a third form of land use no longer evident in the Cross Canyon Corridor Historic District today is mineral exploration/extraction. Although the mineral wealth of the canyon was first explored by the Spanish as early as 1540, mineral exploration at the Canyon did not begin in earnest until the 1880s, when Euro-American prospectors made use of established Native American trails in the region and actively began to search the inner canyon and areas along Bright Angel Fault for valuable minerals (Anderson 1998, 57). Among these early prospectors were William Ashurst and John Marshall, who claimed and documented the trail along Bright

Angel Fault that led from the South Rim to Indian Garden in 1890. Later that year, the trail was formally constructed by entrepreneurs Niles Cameron, Pete Berry, and others for the purpose of conveying burros to transport mining equipment and ore in and out of the inner canyon. However, after recognizing the trail's potential for tourism, the men re-recorded the route as the "Bright Angel Toll Road" in 1891 and began to operate the trail for tourists and travelers.

While prospecting continued to occur along the Bright Angel Trail and at Indian Garden through the 1890s, legitimate mining enterprises at the Canyon ultimately ceased in 1901 following the arrival of the Grand Canyon Railway. Although Ralph and Niles Cameron continued to file mining claims along the trail, at Indian Garden, and near the mouth of Pipe Creek, nearly all of these claims were filed for the purpose of securing their economic interests at the Grand Canyon and not for mineral extraction. At least four claims filed by the men between 1901 and 1904 were later rejected by the Federal Government as they could find no evidence that the claims were ever developed for mining purposes.

BRIGHT ANGEL TRAIL LANDSCAPE AREA

CONTRIBUTING FEATURES:

1. Transportation corridor
2. Utility corridor
3. Recreation/tourism use
4. Mineral exploration/extraction

NON-CONTRIBUTING FEATURES:

1. Emergency facilities for Recreation/Tourism

INDIAN GARDEN LANDSCAPE AREA

CONTRIBUTING FEATURES:

1. Transportation Corridor
2. Utility corridor
3. Recreation/tourism use
4. Mineral exploration/extraction

NON-CONTRIBUTING FEATURES:

1. Emergency facilities for Recreation/Tourism
2. Administrative facilities
3. Maintenance facilities

COLORADO RIVER TRAIL LANDSCAPE AREA

CONTRIBUTING FEATURES:

1. Transportation corridor
2. Utility corridor

PHANTOM RANCH LANDSCAPE AREA

CONTRIBUTING FEATURES:

CONCESSION AREA

1. Transportation corridor
2. Utility corridor
3. Recreation/tourism use
4. Agriculture

BRIGHT ANGEL CREEK DELTA AREA

1. Transportation corridor
2. Utility corridor
3. Recreation/tourism use

NON-CONTRIBUTING FEATURES:

CONCESSION AREA

1. Expanded facilities for Recreation/tourism

BRIGHT ANGEL CREEK DELTA AREA

1. Emergency facilities for Recreation/tourism

SOUTH KAIBAB TRAIL LANDSCAPE AREA

CONTRIBUTING FEATURES:

1. Transportation corridor
2. Utility corridor

NON-CONTRIBUTING FEATURES:

1. Emergency and restroom facilities for Recreation/tourism

YAKI POINT (SOUTH KAIBAB TRAILHEAD) LANDSCAPE AREA

CONTRIBUTING FEATURES:

1. Transportation corridor
2. Utility corridor
3. Administrative use

NORTH KAIBAB TRAIL LANDSCAPE AREA

CONTRIBUTING FEATURES:

1. Transportation corridor
2. Utility corridor

NON-CONTRIBUTING FEATURES:

1. Emergency and restroom facilities for Recreation/tourism

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

CONTRIBUTING FEATURES:

1. Utility corridor
2. Recreation/tourism use

COTTONWOOD CAMPGROUND LANDSCAPE AREA

CONTRIBUTING FEATURES:

1. Utility corridor
2. Recreation/tourism use

ROARING SPRINGS LANDSCAPE AREA

CONTRIBUTING FEATURES:

1. Utility corridor
2. Recreation/tourism use

NON-CONTRIBUTING FEATURES:

1. Expanded/emergency facilities for Recreation/tourism

8. NATURAL SYSTEMS AND FEATURES:

The trails of the Cross Canyon Corridor traverse one of the most renowned natural systems in the world. One of the world's largest canyon systems and widely recognized as "one of the seven natural wonders of the world," the Grand Canyon actually consists of a complex network of canyons and drainages within the main gorge that has been cut by the Colorado River over millions of years. The Cross Canyon Corridor travels over, along, and through a grand scale of escarpments, pediments, buttes, plateaus, and ridges, as well as a number of subordinate features such as creeks, dry washes, perennial streams, seeps, and springs.

In the arid west, elevation changes, landforms, hydrology, and wind play a large role in shaping the natural systems. Soils within the Grand Canyon are highly variable ranging from rich forest soils found on the North Rim to dry sandy mineral and bedrock soils found within the inner canyon. The sandy mineral and bedrock soils erode easily and contribute to the fragile landscape within the Canyon.

Microclimate extremes are further enhanced by the shade and long shadow lines created by the steep cliffs and canyon landforms, and the exposure of slopes. North-facing slopes receive about one-third the typical amount of sunlight, which results in the growth of plants that are typically found at higher elevations. The south-facing slopes receive abundant sun and contain vegetation that can be found in the much hotter environment of the Sonoran Desert. A slight depression, drainage, or sheltered area often presents an opportunity for the smallest amount of moisture to collect and greatly influence the natural system of both flora and fauna. Small-scale pockets of variability within the trail corridor provide life-sustaining components that are vital to survival in this rugged and often hostile environment.

This discussion of natural systems of landscape areas is organized by the individual rim-to-river trail with which each of the landscape areas is associated. The discussion of natural systems within the Indian Garden Landscape Area is an exception to this organization, as it is excerpted directly from the Indian Garden CLR (JMA 2005).

BRIGHT ANGEL TRAIL LANDSCAPE AREA

Originally utilized by Native Americans, and further improved in the late 1800s by Euro-American miners and entrepreneurs, the Bright Angel Trail follows the natural break in the landscape created by the Bright Angel Fault (Photograph 96). This fault stretches from the South Rim to the North Rim, and is known on the north side of the Colorado River as Bright Angel Canyon. Garden Creek and Pipe Creek represent the remnants of a drainage system that continues to erode the bedrock of the canyon. These creeks converge in Pipe Creek Canyon before eventually discharging into the Colorado River. The Bright Angel Trail passes through four biotic communities and also includes linear riparian areas along Garden Creek and Pipe Creek. These creeks slice through the expansive Tonto Plateau which is sometimes referred to as the secondary "shelf" of the Canyon, located approximately 3,000 feet in elevation below the South Rim.

The Bright Angel Trail Corridor's natural systems include those derived from Garden Creek, Pipe Creek, the Colorado River, and the Tonto and Kaibab plateaus.



Photograph 96. Bright Angel Fault with Indian Garden in middleground, looking north, 2009. Source: LSD.

CONTRIBUTING FEATURES:

1. Garden Creek
2. Pipe Creek
3. Bright Angel Fault (Inner Canyon)
4. Colorado River
5. Sand dunes
6. Flood plains
7. Dry washes
8. Tonto Plateau
9. Kaibab Plateau
10. Native flora and fauna

SOUTH KAIBAB TRAIL LANDSCAPE AREA

The South Kaibab Trail is largely an exposed route that traverses the ridgelines and cliff faces of the Canyon. Because this trail was intended as the quickest route from the South Rim to the Colorado River, the alignment follows an aggressive path that is not diverted to avail its users of permanent natural water sources. Only ephemeral streams, seeps, and rainfall contribute to the hydrologic, erosional, and ecological processes found within this trail corridor. Due to the lack of water and the exposed nature of the trail, relief from environmental conditions in the form of shade is only provided in isolated areas where the steep topography casts shadows on the trail (Photograph 97). The trail begins on from the generally flat landscape of Yaki Point, high above the canyon bottom on the Kaibab Plateau. As the trail descends from the Kaibab Plateau on the South Rim, it traverses several significant geologic formations such as Cedar Ridge, Skeleton Point, the Tipoff, Panorama Point, and Granite Gorge. The trail also crosses four biotic communities along its alignment, with riparian vegetation appearing only at the edge of the Colorado River.



Photograph 97. Descending the South Kaibab Trail towards Ooh Aah Point, looking north, 2011. Source: LSD.

CONTRIBUTING FEATURES:

1. Yaki Point
2. Cedar Ridge
3. O'Neill Butte
4. Skeleton Point
5. The Tipoff
6. Colorado River
7. Bright Angel Fault
8. Tonto Plateau
9. Kaibab Plateau
10. Native flora and fauna

NORTH KAIBAB TRAIL, ROARING SPRINGS, COTTONWOOD CAMPGROUND, PHANTOM RANCH, AND BRIGHT ANGEL CAMPGROUND LANDSCAPE AREAS

Descending from the North Rim, the North Kaibab Trail follows Roaring Springs Canyon to the Bright Angel Fault, also known as Bright Angel Canyon in this area north of the Colorado River. The trail then descends Bright Angel Canyon through the box canyon known simply as The Box, and continues on to the Colorado River. Bright Angel Creek continues to erode Bright Angel Canyon as it flows toward its confluence with the Colorado River, where it has formed the Bright Angel Creek Delta. This delta, located within the southern portion of the Phantom Ranch Landscape Area, offers generally flat areas of sediment that have been slowly deposited over thousands of years. As flat areas are limited in the Canyon, this area was developed by both the NPS and USGS. Due to its extreme elevation changes, the trail passes through four biotic communities and therefore possesses higher plant diversity than either the Bright Angel Trail or the South Kaibab Trail. Riparian vegetation is common along the portions of the Trail from Roaring Springs south to the river, and is directly associated with water sources such as Roaring Springs, Manzanita Creek, Ribbon Falls, Bright Angel Creek, and the Bright Angel Creek Delta (Photograph 98).

CONTRIBUTING FEATURES:

1. Bright Angel Canyon
2. Bright Angel Creek
3. Bright Angel Fault
4. Roaring Springs Canyon
5. Roaring Springs
6. The Transept
7. Ribbon Falls
8. Phantom Creek
9. The Box
10. Colorado River
11. Riparian Areas
11. Flood plains
12. Dry washes
13. Native flora and fauna

INDIAN GARDEN LANDSCAPE AREA

Humans were first drawn to Indian Garden for its water resources—including springs, seeps, and Garden Creek. The water provided irrigation for Native American crops, power for mining operations, and cooling refreshment for tourists. In the early part of the period of significance—during Ralph Cameron's tenure in Indian Garden—water from Garden Creek was mainly used to irrigate vegetable gardens, as an aid for developing photographs at the Kolb Brothers' studio, and likely for food preparation activities. Although a dam was placed across the flow of Garden Creek to create a pond, there was little physical manipulation of water resources.



Photograph 98. Lower Ribbon Falls, facing northwest, 2011.
Source: LSD.

During NPS control of Indian Garden, NPS and CCC crews, along with SFRR civil engineers, created ways to harness these water resources. The NPS and SFRR collaborated to install pipeline and water handling facilities to carry water from Garden Creek up to the South Rim. The Garden Creek bed was channelized with riprap and mortar to prevent washouts from frequent flooding. Over time, people involved with managing Indian Garden turned from viewing water as an entirely welcome resource to attempting to control the flood events and natural creek flow.

Overall, however, Garden Creek retains much of the same course at present as it did during the period of significance. It is highly likely that the creek bed margins and floodplain have shifted over time, due to flooding and naturally-occurring erosion of the creek banks. It is not known if the amount of water flowing through the creek has increased or decreased since the period of significance. Similarly, the current versus historic condition of the springs, seeps, and dry washes is unknown.

The surrounding cliffs of the South Rim and desert scrub-covered slopes appear to have changed very little. Erosion and flooding have, however, impacted some of the rocky slopes closer to the creek by undercutting the slope toe and exposing loose soil and rock.

The wildlife component of Indian Garden is not well-documented from a historical point-of-view. It is likely that any native wildlife species present in Indian Garden during the period of significance still reside on the site.

CONTRIBUTING FEATURES:

1. Intermittent streams in the Administration Area
2. Garden Creek
3. Floodplain
4. Perennial streams
5. Dry washes

NON-CONTRIBUTING FEATURES:

1. Wet area in the Day Use Area

9. SMALL SCALE FEATURES:

The Cross Canyon Corridor Historic District contains a number of small-scale features, many of which post-date the period of significance. Retention of the few historic-era features that remain in the District, however, is likely due to the durability and longevity of the Rustic-style materials used for their construction. Nearly all of the small-scale features documented within the District's ten landscape areas are associated with or support tourist activities. Other small-scale features, including the log and stone water bars and metal reinforcement systems present along the District's network of trails, are related to drainage and stability issues caused by natural processes such as weathering and erosion. The following section provides a discussion of the small-scale features documented within each of the District's landscape areas.

BRIGHT ANGEL TRAIL LANDSCAPE AREA

Recurring small-scale features documented within the Bright Angel Trail Landscape Area are generally located at the rest areas and include wood rail fencing, signage, and benches (Photograph 99). The rest houses also have non-contributing small-scale features such as potable water spigots, emergency phones, and informational signage. Additionally, some rest areas provide interpretative signage for the Canyon's geological, landscape, or wildlife attributes.

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Stone edging along the Bright Angel Trail
2. Log and stone water bars along the Bright Angel Trail
3. Wood rail fencing

NON-CONTRIBUTING FEATURES:

1. Informational/interpretative signs
2. Hitching posts
3. Benches
4. Emergency phones at rest houses
5. Potable water spigots at rest houses



Photograph 99. Log water bars along the Bright Angel Trail, facing north, 2009.
Source: LSD.

INDIAN GARDEN LANDSCAPE AREA

No visible, intact small-scale features remain from the Cameron-era sub-period of significance, although some features may be buried underground. While no known features remain, existing small-scale features perform many of the same functions; missing features such as hitching posts, signage, rain gauges, and wood fencing have been replaced over time with more contemporary materials. Features that were likely no longer needed, such as the oil float box, Kolb Studio items, and small-scale features related to Cameron's retail enterprises, were not updated or replaced.

NON-CONTRIBUTING FEATURES:

ADMINISTRATION AREA

1. Picnic table
2. Windsock and post
3. Flagpole
4. Tree cages
5. Utility meters and irrigation boxes
6. Wire mesh fence

CAMPGROUND AREA

1. Picnic tables
2. Camp site markers
3. Ammunition box
4. Backpack bar
5. "Contemporary" benches
6. Utility and irrigation boxes

DAY USE AREA

1. "Contemporary" bench
2. Continuous bench seating
3. Electrical distribution box
4. Picnic tables
5. Wood and wire mesh fence
6. PVC pipe

PUMP STATION AND CORRAL AREA

1. Boulder and log edging
2. Wooden cabinet
3. Electric hook-up
4. "No hiking" sign
5. Metal pipe rail fencing
6. Chain-link fencing
7. "Contemporary" benches
8. Interpretative wayside
9. Utility structures

NON-CONTRIBUTING, COMPATIBLE FEATURES:

ADMINISTRATION AREA

1. Typical signage
2. Stone edging

CAMPGROUND AREA

1. "Rustic" benches
2. Stone edging
3. Drinking fountains
4. Typical signage

DAY USE AREA

1. Stone edging
2. Typical signage
3. "Rustic" bench
4. Drinking fountains

PUMP STATION AND CORRAL AREA

1. Stone edging
2. Wooden gate
3. Wooden troughs with metal edging
4. Large metal troughs
5. Rustic" benches
6. Drinking fountain
7. Typical signage

UNDETERMINED FEATURES:

ADMINISTRATION AREA

1. Hitching post

PUMP STATION AND CORRAL AREA

1. Hitching posts

COLORADO RIVER TRAIL LANDSCAPE AREA

Only three types of small-scale features were observed in association with the Colorado River Trail. These include native stone and log water bars and native stone edging located along the trail alignment, and a wooden directional sign near the Pipe Creek restroom building. The edging, which consists of loosely arranged piles of boulders or a single course of boulders placed end to end, delineates the trail alignment in areas of elevation change or where the alignment diverges from the steep canyon walls, thereby encouraging safe passage of the route for both mules and hikers. Although the stone edging and water bars blend in with the surrounding landscape and are similar in construction to other stone features constructed by the CCC, the expedient nature of their construction suggests that these features likely post-date the original construction of the Colorado River Trail. The log water bars and wooden sign are “rustic” in appearance, although their condition suggests that these features are also modern. For these reasons, all of the stone and wood features present along the trail are considered to be non-contributing, compatible features of the Colorado River Trail Landscape Area.

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Stone edging along the upslope and downslope sides of the trail
2. Stone and log water bars
3. Directional sign at the Pipe Creek restroom building

PHANTOM RANCH LANDSCAPE AREA

Unlike the other landscape areas of the Cross Canyon Corridor Historic District, Phantom Ranch retains a number of small-scale features that date to the District's period of significance. Most notable are the lampposts and the original Phantom Ranch dinner bell located within the Concession Area. The metal dinner bell, which hangs on a wooden post to the east of the Phantom Ranch Dining Hall, was erected in 1922 and still signals meal time for guests of the ranch today (Photograph 100). The lampposts consist of metal poles with arched arms and cobra-head light fixtures (Photograph 101). The majority of the lights are situated in the northern portion of the Ranch along the North Kaibab Trail in close proximity to the Colter-designed guest houses. Although the exact age of the lights is unknown, it is probable that they were installed by the Fred Harvey Company and the NPS during expansion of the ranch in the late 1920s. Other contributing small-scale features include architectural elements of the ranch's historic buildings, such as exterior light fixtures and stone and concrete steps. Historic photographs of the ranch, dating to the 1920s and 1930s, confirm that most of these features have not been modified since their installation.

Non-contributing small-scale features of the Phantom Ranch Landscape Area consist primarily of items related to guest and NPS/Xanterra staff comfort and safety. These include fire extinguishers and wall-mounted air conditioning units present on the exterior of many of the ranch's buildings, composite wood benches and picnic tables at the guest cabins and dining hall, metal and wood “park” benches in the seating area to the east of Guest Cabins No. 8 and 9, numerous water spigots, modern interpretative signage and railings at the Bright Angel Ruin, fire grates in the common area to the west of the dining hall, and telephones at the restroom buildings to the southeast of the Hiker Dorms and at the Bright Angel Creek Delta. Other non-contributing small-scale features, such as the wooden fire boxes, footlockers for outbound supplies, and metal water troughs are related to NPS administrative functions at the ranch.



Photograph 100. Dinner bell to the east of the Phantom Ranch Dining Hall, facing southwest, 2011. Source: LSD.



Photograph 101. Lamppost to the southeast of Guest Cabin No. 1, facing northwest, 2011. Source: LSD.

Signage, consisting of placards attached to buildings and free-standing signs, is also present at the ranch. The signs, which are largely constructed of wood, provide visitors with directional and interpretative information, as well as the functions and names of many of the ranch's structures. Although these features are likely modern, they harmonize with the natural setting of the ranch and its Rustic-style buildings and are therefore considered to be non-contributing, compatible features of the landscape. Hitching posts, freestanding wood display cases, the stone and wood benches at the Amphitheatre, and a "rustic" wooden bench in the Bright Angel Creek Delta area are also considered to be non-contributing, compatible features.

CONTRIBUTING FEATURES:

CONCESSION AREA

1. Historic lampposts
2. Dinner bell to the east of the Phantom Ranch Dining Hall
3. Architectural features of the Fred Harvey Company, SFRR, NPS, and CCC-era buildings (e.g., stone and concrete steps and light fixtures)

BRIGHT ANGEL CREEK DELTA

1. Historic light fixtures on USGS, NPS, and CCC-era buildings

NON-CONTRIBUTING FEATURES:

CONCESSION AREA

1. Fire extinguishers
2. Composite wood benches
3. Wall-mounted air conditioning units
4. Wooden fencing
5. Picnic tables
6. Fire grates to the south of the Laundry Building
7. Wood and metal footlockers for outbound storage
8. Post-1942 light fixtures
9. Telephone at the restroom building to the southeast of the Hiker Dorms
10. Interpretative/informational signage
11. Wood and metal "park" benches in the seating area to the north of the Recreation Hall
12. Wooden placards with building names
13. Volleyball net and gravel court adjacent to the Trail Crew Bunkhouse
14. Metal water troughs

BRIGHT ANGEL CREEK DELTA

1. Picnic tables
2. Metal railings in the vicinity of Bright Angel Ruin
3. Post and wire fencing in the vicinity of Boat Beach
4. Telephone at the Restroom Building
5. Wooden fire boxes

NON-CONTRIBUTING, COMPATIBLE FEATURES:

CONCESSION AREA

1. Hitching posts
2. Freestanding wooden display cases
3. Stone and wood benches at the Amphitheatre

BRIGHT ANGEL CREEK DELTA

1. Hitching posts
2. Wooden benches
3. Interpretative/informational signage

SOUTH KAIBAB TRAIL LANDSCAPE AREA

Small-scale features documented within the South Kaibab Trail Landscape Area consist of various types of non-contributing and non-contributing compatible features, the majority of which were likely installed by the NPS after 1942. No features dating to the District's period of significance were identified. All of the features are associated with visitor and hiker safety and on-going maintenance and repairs to the trail.

Signage is common along the trail alignment and includes wooden location markers and modern metal information/caution signs (Photograph 102 and Photograph 103). Although the condition of many of the wooden signs suggests that they are modern, a historic photograph of the South Kaibab Trail indicates that similar signage, comprised of round log posts with wooden information boards attached, was present along the South Kaibab Trail during the 1930s (Photograph 104).



Photograph 102. Wooden marker for the East Tonto Trail along the South Kaibab Trail, in the vicinity of the Tip-off, looking northeast, 2011. Source: LSD.



Photograph 103. Metal sign along the South Kaibab Trail, possibly erected during the Mission 66 era, looking northwest, 2011. Source: LSD.



Photograph 104. Wooden sign showing mileages for features located along the Kaibab Trail, date unknown (Photograph courtesy of the GRCA Archives, Grand Canyon National Park). The clothes on the people in the foreground suggest that the photograph was taken during the 1950s.

Other small-scale features present along the trail include stone edging along the upslope and downslope sides of the trail and around vegetation at Cedar Ridge, hitching posts, iron components of a modern repelling system used by the NPS for search and rescue missions, slope reinforcement comprised of metal piping and spikes, native stone and log water bars to facilitate drainage, and an emergency telephone in the vicinity of the Tip-off. Of these, only the stone and log trail features and the hitching posts are considered to be non-contributing, compatible features of the South Kaibab Trail Landscape Area.

NON-CONTRIBUTING FEATURES:

1. Emergency telephone at the Tip-off
2. Metal informational signage
3. Components of modern NPS repelling system
4. Metal spikes and piping for trail reinforcement

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Stone edging along trail
2. Hitching posts
3. Stone and log water bars
4. Wooden location markers

YAKI POINT (SOUTH KAIBAB TRAILHEAD) LANDSCAPE AREA

The concrete and stone steps of the NPS Garage and Fred Harvey Residence are the only contributing small-scale features of the Yaki Point Landscape Area. Due to its proximity to the South Kaibab trailhead and use as a staging area for pack animals, the majority of the remaining small-scale features are related to visitor and staff use and animal husbandry.

Numerous wooden and metal signs showcasing the geological features and history of the trail are present near the parking area and trailhead and provide visitors with a glimpse of the historical importance of the trail before they make their descent. Hitching posts and metal water troughs are present in the vicinity of the modern mule corral, the Fred Harvey Mule Barn, and the NPS Hay Shed. Other small-scale features related to visitor/staff use include picnic tables, dumpsters and trash receptacles, a clothesline at the NPS Residence, and a telephone near the NPS Hay Shed and South Kaibab trailhead (Photograph 105). Native stone edging, consistent with that found in the other landscape areas within the District, lines the edges of a paved footpath that extends to the South Kaibab trailhead, as well as the perimeter of the parking area and the shoulders of the road leading to the parking area. All of these features were installed by the NPS after 1942.



Photograph 105. Picnic tables, trash receptacles, and stone edging adjacent to the restroom building at Yaki Point, looking northeast, 2011. Source: LSD.

CONTRIBUTING FEATURES:

1. Stone and concrete steps at Fred Harvey Company and NPS-era buildings

NON-CONTRIBUTING FEATURES:

1. Modern informational/interpretative signage near South Kaibab trailhead
2. Telephone near the South Kaibab trailhead
3. Picnic tables
4. Dumpsters and trash receptacles
5. Clothesline at the NPS Residence

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Wooden signage
2. Stone edging
3. Hitching posts

NORTH KAIBAB TRAIL LANDSCAPE AREA

Recurring small-scale features located within the North Kaibab Trail Landscape Area include wooden and metal information/interpretative signs; numerous components of a modern NPS repelling system; and trail features such as rebar and metal spike/piping reinforcement; native stone and log water bars; and native stone edging (Photograph 106). Small-scale features associated with the restroom building at Supai Tunnel include the stone steps leading from the trail to the restroom (Photograph 107), native stone retaining walls and edging, numerous hitching posts, a potable water spigot with a masonry base, an emergency phone, and wooden signage. Most of these features are built of organic materials such as wood and stone, and all are similar to those found along the South Kaibab Trail, Bright Angel Trail, and Colorado River Trail.

NON-CONTRIBUTING FEATURES:

1. Metal information/interpretative signs
2. Emergency telephone
3. Components of modern NPS repelling system
4. Rebar reinforcement

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Hitching posts
2. Wooden information/interpretative signs

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

Small-scale features documented at the Bright Angel Campground are associated with visitor use of the campground as well as the stabilization of Bright Angel Creek. Non-contributing features are the most common type found at the campground and these include picnic tables, metal food lockers, steel pole backpack hangers, and grills, all of which at present at each of



Photograph 106. Metal interpretative sign and log water bars in the vicinity of the Needle, looking northwest, 2011. Source: LSD.



Photograph 107. Stone steps leading from the North Kaibab Trail to the Supai Tunnel restroom building, looking northwest, 2011. Source: LSD.

the 31 campsites situated within the 3.5 acre site (Photograph 108). Metal signage, located near the footbridge leading to the North Kaibab Trail and along the main footpath through the area, is also considered to be a non-contributing feature. Other small-scale features present at the campground, such as the stone edging along the footpath, wire and rock rip-rip along the west bank of Bright Angel Creek, wooden directional signage, and boulder and log campsite markers (Photograph 109), are considered to be non-contributing, compatible features due to their "Rustic" appearance and use of natural materials. Additionally, backpack hangers crafted from old trans-canyon telephone poles are present at some of the campsites and are also considered to be non-contributing compatible features of the District.

NON-CONTRIBUTING FEATURES:

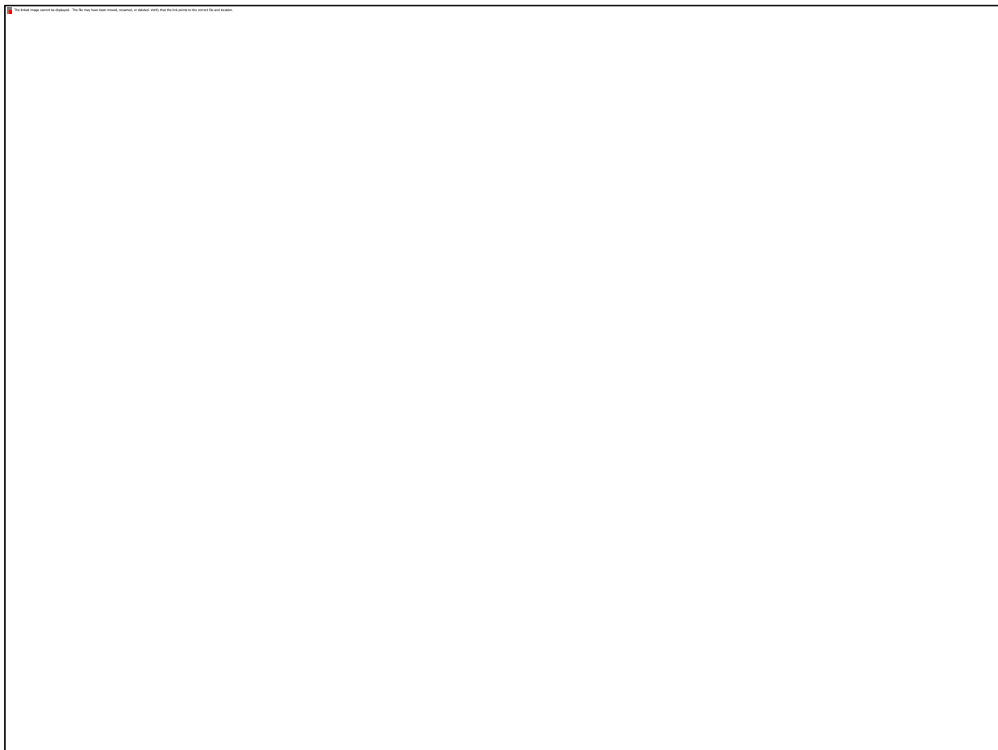
1. Picnic tables
2. Metal food lockers
3. Backpack hangers
4. Metal signage
5. Metal grills
6. Wire bank reinforcement

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Stone edging along footpath
2. Wooden signage
3. Boulder and log campsite markers
4. Backpack hangers crafted from old trans-canyon telephone poles
5. Stone and wire rip-rip along the west bank of Bright Angel Creek



Photograph 108. Picnic tables, backpack hanger, and metal food lockers at a large group campsite at Bright Angel Campground, looking south, 2011. Source: LSD.



Photograph 109. Boulder marker for campsite no. 28 at the Bright Angel Campground, looking west, 2011. Source: LSD.

COTTONWOOD CAMPGROUND LANDSCAPE AREA

The small-scale features at Cottonwood Campground are nearly identical to those present at the Bright Angel Campground. Similar to the camp sites at the Bright Angel Campground, each of the 14 sites within the Cottonwood Campground Landscape Area contain a backpack hanger (some of which have been fashioned from old trans-canyon telephone poles), a picnic table, and metal food lockers. The camp sites are accessed by short, stone-edged footpaths that originate from the North Kaibab Trail, which serves as the main thoroughfare through the 5.4-acre site. A wooden marker designating the number of each campsite is present at the intersection of the footpath and trail (Photograph 110).



Photograph 110. Backpack hanger, stone edging, and the wooden marker at campsite no. 11 at the Cottonwood Campground, looking southwest, 2011. Source: LSD.

Small-scale features associated with the Ranger Residence include a wooden placard and a wooden fence. The fence is present to the rear of the structure and surrounds a stone patio, and the placard is present on the main elevation of the building. Additionally, an emergency phone mounted on a wooden post is present to the southeast of the building's entrance.

NON-CONTRIBUTING FEATURES:

1. Wooden bench at Ranger Residence
2. Wooden and metal water troughs
3. Picnic tables
4. Wooden fence to the rear of the Ranger Residence
5. Metal food lockers
6. Backpack hangers
7. Wooden bench at information kiosk
8. Emergency phone at Ranger Residence
9. Hose box

NON-CONTRIBUTING COMPATIBLE FEATURE:

1. “Rustic” wooden bench at Ranger Residence
2. Hitching posts
3. Stone edging along North Kaibab Trail and footpaths
4. Wooden signage
5. Wooden placard on Ranger Residence
6. Backpack hangers crafted from old trans-canyon telephone poles
7. Rock and wire rip-rap along the east bank of Bright Angel Creek
8. Native stone water bars along the North Kaibab Trail

ROARING SPRINGS LANDSCAPE AREA

Small-scale features are present in all three development areas of the Roaring Springs Landscape Area. The majority of these features are related to the Trans-canyon Water System, the Pumphouse Operator’s Residence, and visitor use of the Day Use Areas.

Small-scale features documented within the Pumphouse Operator’s Residence Area consist of the residence’s stone steps, metal railings, a potable water spigot, a wooden fence, a basketball hoop, wooden signage, wire and rock rip-rap along the west bank of Bright Angel Creek, stone edging along the footpath and stairs, and a lamp post. The metal lamp post is similar to those found at Phantom Ranch and consists of a metal post with an arched arm and light fixture. Historic photographs on display inside the residence suggest that an earlier building (referred to as the “Powerhouse Residence” on the photograph) may have been constructed in the area in 1928 (Photograph 111). If so, it is possible that the lamp post was installed at the same time as the Pumphouse Operator’s Residence, which would also make it contemporaneous with the lamp posts at Phantom Ranch, which were presumably installed in the late 1920s. Of these features, only the stone steps of the residence and the lamp post are considered to be contributing to the District.

Small-scale features present in the Pumphouse Area include stone and concrete steps (some with metal railings) and an interpretative sign detailing the history of the Trans-canyon Water System. A stone staircase leading from the footpath to the modern Pumphouse facility is considered to be a non-contributing, compatible feature of the landscape area due to its use of locally-sourced stone as well as its similarity to other features of the District (Photograph 112).

Small-scale features of the Day Use Area are related to visitor use and include hitching posts, trash receptacles, picnic tables, and a potable water spigot. Native stone edging, water bars, and steps located along the Roaring Springs spur trail are also considered non-contributing, compatible features of the Roaring Springs Landscape Area (Photograph 113).

CONTRIBUTING FEATURES:

PUMPHOUSE OPERATOR’S RESIDENCE AREA

1. Stone steps at Pumphouse Operator’s Residence
2. Lamp post

NON-CONTRIBUTING FEATURES:

PUMPHOUSE OPERATOR’S RESIDENCE AREA

1. Metal railings along steps
2. Wooden fence
3. Basketball hoop
4. Hose box
5. Emergency phone mounted the residence’s southern elevation



Photograph 111. Lamp post in the yard to the south of the Roaring Springs Pumphouse Operator's Residence, looking southwest, 2011. Source: LSD.



Photograph 112. Stone steps leading from a footpath to the modern Pumphouse facility at Roaring Springs, looking northeast, 2011. Source: LSD.



Photograph 113. Native stone edging and water bars at the Roaring Springs Day Use Area, looking northeast, 2011. Source: LSD.

PUMPHOUSE AREA

1. Metal interpretative sign
2. Metal railings along steps
3. Concrete steps to heli-pad
4. Metal steps to Water Intake Structure

DAY USE AREA

1. Picnic tables
2. Trash receptacles

NON-CONTRIBUTING, COMPATIBLE FEATURES:

PUMPHOUSE OPERATOR'S RESIDENCE AREA

1. Wooden signage
2. Wire and rock rip-rap along the west bank of Bright Angel Creek
3. Stone edging along footpaths and stairs
4. Wooden name placard

PUMPHOUSE AREA

1. Stone steps

DAY USE AREA

1. Stone edging along Roaring Springs spur trail
2. Stone water bars along Roaring Springs spur trail
3. Hitching posts
4. Stone base around potable water spigot

10. SPATIAL ORGANIZATION:

The overall spatial organization of the Cross Canyon Corridor Historic District is driven by its distinctive nature as a travel corridor that stretches from rim to rim of one of the largest canyon formations in the world. The four trails of the corridor have been engineered to connect to one another and link the remaining landscape areas. The location of the destination landscape areas is generally based on opportunistic use of the few flat areas within the corridor for development purposes.

Both the Bright Angel Trail and South Kaibab Trail originate on the South Rim of the Grand Canyon. On its descent into the inner canyon, the Bright Angel Trail passes through the Indian Garden Landscape Area and continues on to the Colorado River Trail. The Colorado River Trail subsequently connects to the South Kaibab Trail and to the North Kaibab trail via Silver Bridge and a spur trail in the Phantom Ranch Landscape Area. The South Kaibab Trail begins at Yaki Point and sharply descends to its terminus at the south end of the Kaibab Suspension Bridge (Black Bridge). The North Kaibab Trail is encountered at this point and crosses over the Colorado River at the Kaibab Suspension Bridge (Black Bridge). The North Kaibab Trail then passes through the Phantom Ranch Landscape Area and past the Bright Angel Campground Landscape Area as it extends to the north. The trail eventually passes through the Cottonwood Campground and Roaring Springs landscape areas, and terminates at the North Rim.

BRIGHT ANGEL TRAIL LANDSCAPE AREA

The spatial pattern of the Bright Angel Trail Landscape Area is fundamentally shaped by three dominant geological features—the Bright Angel Fault, Tonto Plateau, and Pipe Creek. In the same manner in which the Colorado River carved the main gorge of the Grand Canyon, Garden Creek represents the remnant drainage system that carved as the canyons of the Bright Angel Fault. Tributary drainages—dry washes and intermittent streams—intersect Garden Creek and dissect its linear pattern. These interruptions provide vistas at a more intimate scale than the ever-present grand view of the main gorge of the Canyon. The sense of enclosure and internally-focused experience of the inner canyon is briefly interrupted by the open expanse of the Tonto Plateau. As the corridor enters into the Pipe Creek tributary, the sense of enclosure returns.

Overall, the spatial organization of the Bright Angel Trail Landscape Area has changed very little since the corridor's period of significance. The Bright Angel Trail serves as the main connector around which tributary trails and developed use areas are organized. The South Rim and Indian Garden are the two main use areas that define the trail. While the scale of these main use areas varies, they are independently organized and internally focused, providing visitors with a variety of activities and services related their function as destinations. The One-and-a-Half-Mile, Three-Mile, and Pipe Creek (also known as the River Rest House) Rest Houses are subordinate areas of spatial development dispersed between the South Rim and Indian Garden (Photograph 114). The spatial pattern of each rest house area reflects their constrained topography (i.e., location under rock outcroppings, along minor ridge lines, and



Photograph 114. Approaching Three-Mile Rest House from the South Rim along the Bright Angel Trail, looking north, 2009. Source: LSD.

creek beds). The rest houses provide the traditional nucleus of visitor comfort and provide shade, views of the Canyon, and a place to obtain water. Informational and/or interpretive signage is also present at these locations. The restroom buildings are typically located on the perimeter of the rest house areas to avoid any detracting from the rest house experience.

CONTRIBUTING FEATURES:

1. Organization of the trail along existing landforms, including Bright Angel Trail, the South Rim, Garden Creek Canyon, and the Tonto Plateau
2. Organization of the trail along existing water features, including the Colorado River, Garden Creek, and Pipe Creek
3. Organization of the rest houses along the trail
4. Enclosure of views along the trail and slightly more open views adjacent to intersecting canyons
5. Organization of use areas along the trail

INDIAN GARDEN LANDSCAPE AREA

The current spatial organization of the Indian Garden Landscape Area differs significantly from that which existed during the District's period of significance, particularly during the Cameron-era. During the Cameron years, from 1903 until 1927, development of Indian Garden was centralized along the Bright Angel Trail. Cameron's stone house, the tent frame groupings, the vegetable garden, and other miscellaneous buildings and structures were focused on the trail corridor. Other subordinate spaces included the corral to the south and the alfalfa field to the north.

When the NPS gained control over the site in 1927, work crews demolished Cameron's buildings and structures and replaced them with their own development. The new NPS-era construction began in a similar location as Cameron's former camp, south and west of the Bright Angel Trail/Plateau Point Trail split. Although new construction was also aligned along the Bright Angel Trail, it was focused inward, away from the trail, creating distinct gathering spaces away from the trail.

Between 1927 and 1942, NPS-constructed spaces included a picnic area, a stone wall-enclosed gathering space which is no longer extant; a space north of the Caretaker's Residence which once contained dry-laid stone erosion-control or sewage-handling channels and the Pumphouse space, which has been modified since the period of significance. Patterns of spatial organization constructed prior to 1942 which are missing from the landscape include the mule barn and corral space—now located approximately where a picnic area once stood, and the former sludge trenches—once located west of the current Day Use Area. The only discernible spatial pattern which appears to remain from the early half of the period of significance, 1903 until 1927, are the faintly distinguishable rows of trees that once helped define the rows of tent frames used by early tourists.

The spatial organization of Indian Garden during the NPS years remained fairly stable until the 1989 rehabilitation of the site. The rehabilitation resulted in a reorganization of space and the addition of new construction to the south, which served to make the site even less centrally-focused. Although smaller spaces, such as the terrace between the Caretaker's Residence and Rock House, the Trailside Shelter space, and the Pumphouse space still remain from the period of significance, the overall historic spatial patterns are no longer intact.

CONTRIBUTING FEATURES:

1. Organization of SAR Cache/Rock House terrace in Day Use Area
2. Organization of Pump Station node in Pump Station and Corral Area
3. Cleared space—cleared floodplain in north Indian Garden area
4. Steep hillside in north Indian Garden area

NON-CONTRIBUTING FEATURES:

1. Gathering space—Pump Operator's Residence in Administration Area
2. Corridor of space in Administration Area
3. Courtyard in Administration Area
4. Backyard space—Ranger Residence in Administration Area
5. Public space—Ranger Residence in Administration Area
6. Sand filter bed in Administration Area
7. Helispot in Administration Area
8. Camping areas in Campground Area
9. Central public space in Campground Area
10. Secondary public space in Campground Area
11. Comfort station spaces in Campground Area
12. Picnic grounds in Day Use Area
13. Visitor rest area in Pump Station and Corral Area
14. Mule Barn facility in Pump Station and Corral Area

15. Helispot in Pump Station and Corral Area

UNDETERMINED FEATURES:

1. Trailside Shelter cleared area in Day Use Area
2. Cleared space at Rehandling Pumphouse in north Indian Garden area

COLORADO RIVER TRAIL LANDSCAPE AREA

Similar to other trails at Grand Canyon National Park, the spatial organization of the Colorado River Trail is largely the result of the natural environment through which the trail traverses. Between 1933 and 1936, enrollees of the CCC carved the 2-mile-long alignment from the schist and granite cliffs of the Tonto Plateau above the Colorado River for the sole purpose of connecting the Bright Angel and South Kaibab Trails. As such, the spatial organization of the trail is generally constrained by these natural features, and maintains a fairly strong sense of enclosure throughout.

The trail originates at the mouth of Pipe Creek near the present-day terminus of the Bright Angel Trail. Only one use area is associated with this landscape area, consisting of a waterless restroom facility at the western end of the trail. The restroom is commonly referred to as the Pipe Creek restroom, and is situated for the convenience of hikers traveling along both the Bright Angel and Colorado River Trails. East of this use area, the topography rises slightly from Pipe Creek and the trail follows the edge of Granite Gorge for the majority of its length. Near the eastern end of the trail, however, the alignment passes through an area of highly permeable sand dunes. In this area, the trail follows the natural topography and veers slightly south of the Colorado River. West of the sand dune area, the trail continues to the northeast and past the Silver Bridge to its terminus at the Kaibab Suspension Bridge.

Unlike the other Cross Canyon Corridor trails, which have been realigned or rebuilt in the years postdating the District's period of significance, the Colorado River Trail continues to follow its original alignment and has not been altered. The spatial organization of the trail therefore remains the same today as it did during the period of significance.

CONTRIBUTING FEATURES:

1. Alignment of the trail from Bright Angel Trail to the South Kaibab Trail
2. The general enclosure of the canyon along the trail

SOUTH KAIBAB TRAIL LANDSCAPE AREA

The South Kaibab Trail is the shortest route from the South Rim to the Colorado River. Between 1924 and 1925, NPS crews carved the 6.4-mile-long trail from the cliffs of the Canyon to connect the south Rim and Phantom Ranch use areas. Because of the desire for a short route, the spatial organization of trail was constrained by the limitations of the natural topography. The alignment of the trail differs from the other trails in the corridor in that it generally follows the narrow ridgeline of Cedar Ridge after dropping over the edge of the South Rim by way of multiple switchbacks. The trail then drops quickly down the east side of Cedar Ridge from Skeleton Point, eventually reaching the relatively flat Tonto Plateau. From the Plateau, the trail descends rapidly down the southern edge of Granite Gorge to the Kaibab Suspension Bridge.

The spatial organization of the South Kaibab Trail Landscape Area has changed very little since the corridor's period of significance. The trail continues to serve as the shortest connection between the South Rim and Phantom Ranch. The trail also connects a number of subordinate use areas, including the Ooh Aah Point overlook, the Cedar Ridge rest area, the Skeleton Point overlook, the Tip-off rest area, and the Panorama Point overlook (Photograph 115). The organization of each of the subordinate use areas is based on locations where relatively flat spots of varying size offer room for overlooks or other development. Both the Cedar Ridge and the Tipoff rest areas contain composting toilets, mule



Photograph 115. Cedar Ridge rest area along the South Kaibab Trail looking north, 2011. Source: LSD.

hitching bars, and other structures and small-scale features related to pack train and visitor use. The spatial pattern of Cedar Ridge and the Tipoff is similar in that all of the properties are located in close proximity to the trail alignment. The restroom buildings function as the nucleus and provide recreationists and hikers with a place to dismount mules, take off their backpacks, and sit and rest. The CCC-constructed Fossil Fern Exhibit at Cedar Ridge is separated spatially from the composting toilet, its location, by necessity, placed at the discovery site of the fossilized fern leaves.

The Ooh Aah Point, Skeleton Point, and Panorama Point overlooks offer panoramic views of the inner canyon. Ooh Aah Point is located 600 feet below the South Rim and South Kaibab trailhead in an area where the trail makes a steep descent through the Coconino Sandstone cliffs of the Tonto Plateau. Due to its proximity to the South Rim, this area serves as a popular day-hike destination for tourists. Skeleton Point is situated at the top of the Redwall Limestone formation, approximately 2,040 feet below the South Rim. This location provides expansive views of the inner canyon, cliff top, and geologic formations to the west. With the exception of a mule hitching bar, this area is also undeveloped. The Panorama Point overlook, located one-half mile from the Tip-off, is the last designated overlook along the trail alignment. At this location, the river-cut Granite Gorge, the Kaibab Suspension Bridge (Black Bridge), the Silver Bridge, and the Bright Angel Creek delta are all clearly visible below. From Panorama Point, the trail descends its last set of switchbacks to its terminus at the Kaibab Suspension Bridge and its associated tunnel.

CONTRIBUTING FEATURES:

1. Organization of the trail along the South Rim and Yaki Point, Ooh Aah Point, Cedar Ridge, Skeleton Point, the Tonto Plateau, The Tipoff, Panorama Point, and Granite Gorge.

YAKI POINT (SOUTH KAIBAB TRAILHEAD) LANDSCAPE AREA

The current spatial organization of the Yaki Point (South Kaibab Trailhead) Landscape Area is predominantly influenced by its proximity to the South Kaibab Trailhead, which differs only slightly from that which existed during the District's period of significance. When the NPS and Fred Harvey Company initially developed the site between 1926 and 1928 for use as a mule staging area, they took into account the intended dual function of this landscape area for both staging and visitor use. This planning resulted in two main use areas within the landscape, both of which still exist. The first use area is located to the southwest of the trailhead and includes buildings and structures associated with visitor use of the South Kaibab Trail. This area has been modified since the period of significance to include a paved parking area, modern restroom facility, and other associated features.

The second use area lies to the southeast of the South Kaibab trailhead, and includes buildings and structures associated with staging pack animal operations at the Canyon. As the use of this area has basically remained the same since the District's period of significance, so has the general organization of the buildings and structures in the landscape area. The NPS residences, Harvey residence, and Harvey Mule barn have all remained clustered in the staging area.

CONTRIBUTING FEATURES:

1. Location of the visitor use area
2. Location of the pack animal staging area
3. Organization of building and structures at the pack animal staging area

NON-CONTRIBUTING FEATURES

1. Organization of the modern features at the visitor use area

NORTH KAIBAB TRAIL LANDSCAPE AREA

The spatial organization of the North Kaibab Trail is based on three dominant natural features—the Bright Angel Fault, Bright Angel Creek, and Roaring Springs Canyon. Over a long period of time, the Bright Angel Fault and Roaring Springs Canyon were carved by the confined drainage of water. Bright Angel Creek reflects the continuation of the erosion of the Bright Angel Fault, north of the Colorado River. In terms of spatial organization, Bright Angel Creek should also be noted as a major drainage collector, incorporating tributaries such as Roaring Springs Creek, Manzanita Creek, Wall Creek, and Phantom Creek. The confluences associated with these tributaries interrupt the otherwise enclosed nature of Bright Angel Canyon, and provide additional views up the intersecting canyons.

Bridges are closely associated with the canyon and creeks and are particularly important to the spatial organization of the trail. The bridges allow hikers and pack trains to safely navigate the trail's numerous canyon and creek crossings. Prior to NPS improvement to the trail between 1920 and 1921, the alignment crossed Bright Angel Creek a total of 94 times (Photograph 116).

Unlike the other three trails of the Cross Canyon Corridor Historic District, the exact location of the North Kaibab Trail Landscape Area has changed considerably since the corridor's period of significance. This is due in part to the trail's proximity to Bright Angel Creek, which has continually presented the NPS with maintenance challenges and required on-going repairs from flooding, erosion, and rock slides. Although the trail has been replaced and re-routed considerably, the overall spatial orientation of the trail along the Bright Angel Fault and Roaring Springs Canyon remains intact. The remnant portion of the "Old Bright Angel Trail" that continues up Bright Angel Canyon to the North Rim is still visible today, but is not maintained by the NPS.



Photograph 116. Approaching footbridge within “The Box” along the North Kaibab Trail looking north, 2011. Source: LSD.

The North Kaibab Trail serves as the main collector from which spur trails and developed use areas are organized. Spur and tributary trails accessible from the route include the Roaring Springs rest area spur trail, the Old Bright Angel Trail, the Ribbon Falls spur trail, and the Clear Creek Trail. Developed use areas include the North Rim, Roaring Springs, Phantom Ranch, and Cottonwood Campground. While the size and function of these main areas vary, they are organized and focused internally as an independent use area that provides visitors with a variety of activities and services related to its location and function as a destination. The historical spatial organization of trail as linking the North Rim and the Colorado River as terminal destinations, and Cottonwood Campground and Phantom Ranch as respite points remains intact today.

CONTRIBUTING FEATURES:

1. Organization of the trail along Bright Angel Fault, Roaring Springs Canyon, and Bright Angel Creek
2. Organization of the trail as a collector trail for other trails, including the Roaring Springs rest area spur trail, the Old Bright Angel Trail, the Ribbon Falls spur trail, and the Clear Creek spur trail
3. Organization of the trail as a link between the North Rim, Roaring Springs, Cottonwood Campground, Phantom Ranch, and Bright Angel Trail

ROARING SPRINGS LANDSCAPE AREA

The Roaring Springs Landscape Area stretches approximately 0.8 miles along the steeply sloped southwestern side of Roaring Springs Canyon and the western side of Bright Angel Canyon. The Roaring Springs Day Use Area is located at the northernmost extent of the landscape area, at the bottom of Roaring Springs Canyon and just upstream from Roaring

Springs (Photograph 117). The Day Use Area is connected to the North Kaibab Trail by an unnamed trail that is benched into the southwestern slope of Roaring Springs Canyon. The Roaring Springs Pumphouse is located approximately 0.2 miles southeast of the Day Use Area, near the center of the Roaring Springs Landscape Area. A narrow and unmarked spur trail resembling a game trail leads from the North Kaibab Trail to the Pumphouse. The Roaring Springs Pumphouse Residence is located at the southernmost extent of the landscape area, overlooking Bright Angel Creek to the east.



Photograph 117. Roaring Springs Day Use Area looking north, 2009. Source: LSD.

These three areas within the landscape area are spatially organized along the down slope of the North Kaibab Trail, with nearly 500 feet in elevation separating the areas. Both the Day Use Area and the Pumphouse Residence area were used during the period of significance, and retain the general spatial separation from one another. The site specific organization of these two areas, however, lacks the spatial organization that was present during the period of significance since most buildings and features from that period have since been removed. The Roaring Springs Pumphouse area was constructed after the period of significance.

CONTRIBUTING FEATURES:

1. The spatial separation of the Day Use Area and the Pumphouse Operator's Residence Area

NON-CONTRIBUTING FEATURES:

1. The site-specific organization of the Day Use Area and the Pumphouse Operator's Residence Area
2. The Roaring Springs Pumphouse Area

MISSING FEATURES:

1. Site specific organization of the buildings and features that were removed from the Day Use Area and the Pumphouse Residence Area

COTTONWOOD CAMPGROUND LANDSCAPE AREA

The spatial organization of the Cottonwood Campground Landscape Area is influenced by Bright Angel Creek and the slopes of Bright Angel Canyon. The campground is located on moderately sloped land that extends from the creek to the base of the vertical canyon walls. The campground is also bisected by a dry wash that separates the standard camp sites from the sites for pack animals. The North Kaibab Trail bisects the campground area along its length, with numerous camp sites clustered on either side of the trail. A ranger station, several outbuildings, and associated features are located within the southern end of the campground, while a mule corral and storage building are spatially separated from other structures at the northern end of the landscape area. Although several buildings and features have been added to the campground, the general spatial organization of the campsites and Ranger Station along the trail has remained similar since the period of significance.

Cottonwood Campground is located more than 4,000 feet below the North Rim, and is nearly half way between the North Rim and the Colorado River. The location of this campground near the half-way point on the North Kaibab Trail has resulted in its use as a logical stopping point both during and after the District's period of significance.

CONTRIBUTING FEATURES:

1. Organization of the campsites and Ranger Station along the North Kaibab Trail
2. Organization of the campground as a half-way point on the North Kaibab Trail

PHANTOM RANCH LANDSCAPE AREA

Both throughout and after the District's period of significance, development in the Phantom Ranch Landscape Area has been constrained by the natural features of the area—primarily the Colorado River and Bright Angel Canyon. Due to the narrow configuration of Bright Angel Canyon approximately one-tenth of a mile north of the Colorado River, development at the Phantom Ranch Landscape Area has been split between northern and southern development areas.

The current spatial organization and overall setting of the concessions area in the northern portion of the Phantom Ranch Landscape Area has changed only slightly since 1922, when the Fred Harvey Company developed the area for use as a tourist camp. Colter's design of the ranch was patterned after other western ranches of the era, and its original buildings included a "large combined dining room and restroom" surrounded by "three large cabins with wide sleeping porches" and a "caretaker's cabin". Other buildings and structures associated with daily operations and maintenance of the camp, such as a water reservoir, a mule barn and corral, and a blacksmith shop were situated to the north and south of the ranch along the eastern canyon wall. A peach, plum, and apricot orchard was also cultivated to the south of the guest cottages, and an alfalfa field for use as livestock feed was developed to the south of the orchard. The orchard, alfalfa field, and mule barn and corral were enclosed by a masonry wall that paralleled the east bank of Bright Angel Creek. During this time, Rust's Trail (which later became the North Kaibab Trail) served as the camp's primary thoroughfare, although the ranch was also accessible from the South Rim via the Bright Angel Trail and Rust's Cable Trail. A secondary trail or footpath, originating from the main trail and extending south to the mule barn and corral, was also present at Phantom Ranch during this time.

In anticipation of increased visitation following the completion of the North Kaibab Trail, in the late 1920s and 1930s, the Fred Harvey Company, SFRR, NPS, and CCC expanded the facilities in the northern portion of Phantom Ranch to include eight new guest houses, two toilets on the banks of Bright Angel Creek, a mule corral, a combined coal and wash house, a swimming pool, a hay shed, a recreation hall, and a shower and bath house. They also expanded the Colter-designed dining hall and remodeled the existing recreation hall. Although these additions and renovations changed the overall appearance of the Phantom Ranch Landscape Area, the spatial organization of the original guest ranch was retained. Additionally,

modern construction at the ranch has followed the same pattern of expansion, with most new development occurring to the north and south of the concession area, to east of the North Kaibab Trail, and along the east bank of Bright Angel Creek.

Today, the dining hall continues to remain the focal point of the ranch, with the guest houses, modern hiker dorms, and restroom and shower facilities clustered together and generally forming a broad surrounding arch (Photograph 118). Administrative buildings, such as the Ranger Station and Trail Crew Bunkhouse are spatially separated to the south of the ranch.



Photograph 118. Phantom Ranch guest cabins looking southwest, 2011. Source: LSD. The Dining Hall is visible near the center of the photograph.

Patterns of spatial organization constructed prior to 1942 which are missing from the landscape include a stone fence along the east bank of Bright Angel Creek, the alfalfa field, and the CCC-constructed swimming pool. The location of the former alfalfa field remains undeveloped, and thereby creates the same feeling of open space as it did when it was cultivated in historic times. Large boulders and earthen berms, once that once outlined the Phantom Ranch swimming pool, also remain to the north of former recreation hall (now referred to as the Employee Bunkhouse). Additionally, although the orchard is no longer maintained, remnant fruit trees still exist in the former orchard area and serve as a visual reminder of this once-important feature within the landscape.

The concession area of the ranch has always been located on relatively flat ground, but differs in appearance from the period of significance in that portions of the area are currently enclosed by a fairly dense tree canopy. Some of these trees may have been planted during the period of significance, but the sense of enclosure from the tree canopy would have been far less at that time.

The spatial organization of buildings and structures within the Bright Angel Creek delta area of Phantom Ranch has also changed only minimally since the District's period of significance.

Because development of the Bright Angel Creek delta and concession area at Phantom Ranch occurred simultaneously, the USGS followed many of Colter's design guidelines which emphasized that the built environment within the inner canyon should harmonize with its natural setting. To accomplish this, early buildings constructed on the delta utilized natural and locally-sourced materials, such as wood and stone, and were situated against the canyon walls to be unobtrusive to the landscape. The early buildings were connected to Rust's Trail (later designated the North Kaibab Trail) and Phantom Ranch by a series of dirt footpaths that were lined with stone. Due to the physical constraints of the delta, later development by the NPS and the CCC often occurred in areas between existing buildings and in open, undeveloped areas along the northern banks of the Colorado River. Following completion of the Silver Bridge in 1966, the spatial organization within the Bright Angel Creek delta was altered slightly to accommodate hikers and backpackers travelling along the Colorado River Trail. Construction of the bridge allowed hikers and backpackers to access Phantom Ranch and the North Kaibab Trail via the Bright Angel Creek delta; prior to this, the only crossing of the Colorado River was the Kaibab Suspension Bridge (Black Bridge) located at the northern terminus of the South Kaibab Trail. The NPS constructed an unnamed dirt spur trail from the north end of the Silver Bridge to the Rock House Bridge and the North Kaibab Trail. This trail became the main trail through the area, and continues to function as an important connector trail for people travelling along the Colorado River Trail. Although numerous administrative buildings and structures have been added to the Bright Angel Creek delta in recent years, the overall spatial organization of the area has been retained.

CONTRIBUTING FEATURES:

1. Organization constrained by the natural features of the area, including the Colorado River, Bright Angel Creek, and Bright Angel Canyon
2. Organization of buildings and structures into northern and southern clusters (concession area and Bright Angel Creek Delta) within the landscape area
3. Organization of buildings and structures constructed by the Fred Harvey Company, SFRR, NPS, and CCC during the corridor's period of significance
4. Organization of buildings and structures constructed by the USGS, NPS, and CCC during the corridor's period of significance
5. Location of Rock House Bridge at Bright Angel Creek
6. Location of Silver Bridge at the Colorado River

MISSING FEATURES:

1. Organization of missing site features, including the Phantom Ranch swimming pool, the alfalfa field to the south of the orchard and the stone fence along the east bank of Bright Angel Creek

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

Both during and after the period of significance, the spatial arrangement of the Bright Angel Campground has been directly influenced by Bright Angel Creek and the steep walls of Bright Angel Canyon. The campground is situated in a long, narrow, and level area immediately west of Bright Angel Creek, with campsites clustered along each side of a central connecting trail. The CCC-constructed comfort station is located near the center of the campground in close proximity to an unnamed bridge that spans Bright Angel Creek and provides access to the North Kaibab Trail and Phantom Ranch. The North Kaibab Trail is also accessible via the Rock House Bridge, which is located just to the south of the campground.

CONTRIBUTING FEATURES:

1. The spatial organization of the campground between Bright Angel Creek and the vertical walls of Bright Angel Canyon
2. The location of the CCC-constructed comfort station near the center of the campground

3. Main collector trail through the campground
4. The general location of campsites along the collector trail

11. TOPOGRAPHY:

The Grand Canyon is approximately 1 mile deep and 10 miles wide. Within this distance, the four trails of the Cross Canyon Corridor Historic District—the Bright Angel Trail, Colorado River Trail, South Kaibab Trail, and North Kaibab Trail—travel over and along a grand scale of escarpments, pediments, buttes, plateaus, and ridges; as well as a number of subordinate features such as dry washes, creeks, perennial streams, seeps, and springs. While these geological and hydrological features represent the natural resources that spurred both prehistoric and historic use of the corridor, they have also been the main obstacles in developing the District for transportation and tourist facilities.

The trails that have been cleared and often literally hewn out of the topographic features in the Canyon have many physical similarities. Many of the trail segments are lined with native stone and wood logs. The trails are often benched into the sides of slopes, with dry-laid walls of native stone either supporting the trail bed or else retaining the grade above the trail. Many of the walls are reinforced with steel rebar, stakes, and pipe. Occasionally, rock and/or wooden logs are laid as pavers on the trail's tread to stabilize small, troublesome sections of trail.

As the landforms within the Canyon vary, the trails and landscape areas experience differing degrees of enclosure. The Bright Angel Trail, Colorado River Trail, and North Kaibab Trail Landscape Areas are relatively enclosed by the surrounding canyon landforms, while the South Kaibab Landscape Area traverses a ridge line and provides very little enclosure from surrounding landforms. Detailed discussions of the topographic setting within the 10 landscape areas of the Cross Canyon Corridor Historic District are discussed below in relation to the four main trail alignments.

BRIGHT ANGEL TRAIL AND INDIAN GARDEN LANDSCAPE AREAS

The Bright Angel Trail Landscape Area traverses approximately 4,800 feet of elevation in a 7.8 mile stretch from the South Rim to Pipe Creek, near the Colorado River. Almost one-half of the trail's total elevation change (approximately 2,100 feet) occurs between the South Rim and the 3-Mile Rest House. The second steepest section of the trail is located at the Devil's Corkscrew at the edge of the Tonto Plateau (Photograph 119). These two sections of trail have historically presented a challenge for maintenance, as they require ongoing tread and edge repairs from rock slides and erosion. Throughout the period of significance (1890–1942) and in recent times, reroutes in these sections have been undertaken to reduce the gradient, promote accessibility for hikers, and increase the sustainability of the trail.

Changes to the existing gradient and cross drainage of the trail have been minimal. The trail's tread has been benched into the corridor's slope, where required. The typical cross section includes a shallow drainage swale on the upslope side of the tread, with the exception of areas where the tread crosses a reinforced dip or waterway that drains to the outer slope of the trail. In a few areas, rock outcroppings have constrained the opportunity to bench the trail into the slope. At these locations, the rock face has been excavated to allow the trail to pass under a rock ledge. In two locations near the trailhead, tunnels have been excavated to allow the trail to pass through at a manageable gradient (Photograph 120).



Photograph 119. Devil's Corkscrew along the Bright Angel Trail, facing east, 2009. Source: LSD.



Photograph 120. View of upper tunnel and South Rim, facing southwest, 2009.
Source: LSD.

The Bright Angel Trail corridor is also characterized by relatively level areas in the section traversing the Tonto Plateau, and again at the bottom of the Devil's Corkscrew on the approach to Pipe Creek. The Indian Garden Landscape Area is located approximately 4.5 miles from the South Rim along the Bright Angel Trail on the Tonto Plateau, and both Cameron's and the NPS's development of Indian Garden made use of the level to slightly sloping topography for siting buildings and structures.

The varied topography of the Bright Angel Trail Landscape Area provides microclimatic advantages depending on the time of day and time of year. The Native American tribes that first used the route took advantage of the elevation at Indian Garden to grow summer crops. Today trail users take advantage of the steep sections of the trail to rest in the shade of the canyon walls during the heat of the day or summer months (Photograph 121). During the colder parts of the day or year, the open plateau areas provide welcome access to the sun's warmth.

CONTRIBUTING FEATURES:

BRIGHT ANGEL TRAIL LANDSCAPE AREA

1. Coconino Plateau
2. Tonto Plateau
3. Colorado River
4. Steep section of trail between South Rim and 3-Mile Rest House
5. Steep section of trail at Devil's Corkscrew
6. Relatively flat topography near Indian Garden
7. Relatively flat topography between Devil's Corkscrew and Pipe Creek
8. Varied topography along entire trail length



Photograph 121. Stepped formation along the Bright Angel Trail which creates a shady area for backpackers and tourists to rest, facing southeast, 2009. Source: LSD.

INDIAN GARDEN LANDSCAPE AREA

1. Relatively flat topography near Indian Garden

NON-CONTRIBUTING FEATURES:

BRIGHT ANGEL TRAIL LANDSCAPE AREA

1. Topographic features related to contemporary trail gradient and cross-slope (stone steps, free standing walls, retaining walls, edging, drainage crossings)

INDIAN GARDEN LANDSCAPE AREA

1. Topographic features related to contemporary trail gradient and cross-slope (stone steps, free standing walls, retaining walls, edging, drainage crossings)

COLORADO RIVER TRAIL LANDSCAPE AREA

The topography of the Colorado River Trail Landscape Area rises slightly from Pipe Creek to the east, and generally parallels the Colorado River (Photograph 122). The trail descends slightly to the Silver Bridge and crosses it to join with the Phantom Ranch Landscape Area. The less severe grades along this 1.8-mile-long corridor allow for a simple, generally flat trail cross section in most areas. Drainage management is less critical, particularly through the highly permeable sand dune areas.



Photograph 122. Overview of the Colorado River Trail (along the ridge at right) from the mouth of Pipe Creek, facing southeast, 2009. Source: LSD.

CONTRIBUTING FEATURES:

1. Slightly sloped section of trail from Pipe Creek to Silver Bridge

NON-CONTRIBUTING FEATURES:

1. Topographic features related to contemporary trail gradient and cross-slope (stone steps, free standing walls, retaining walls, edging, drainage crossings)

YAKI POINT (SOUTH KAIBAB TRAILHEAD) LANDSCAPE AREA

The Yaki Point (South Kaibab Trailhead) Landscape Area is located on the Coconino Plateau, where the topography is flat to rolling. The topography in this landscape area offers little enclosure as it overlooks the South Rim of the Canyon. The flat topography made the area optimal for use as a staging area by the NPS and the Fred Harvey Company during the District's period of significance and continues to remain advantageous today with respect to staging, as well as providing trailhead facilities to users.

CONTRIBUTING FEATURES:

1. Coconino Plateau

NON-CONTRIBUTING FEATURES:

1. Topographic features related to contemporary trail gradient and cross-slope (stone steps, free standing walls, retaining walls, edging, drainage crossings)

SOUTH KAIBAB TRAIL LANDSCAPE AREA

The South Kaibab Trail Landscape Area extends from Yaki Point on the South Rim to the southern terminus of the Kaibab Suspension Bridge at the Colorado River. The trail is the most direct trail to the Colorado River, traversing approximately 4,740 vertical feet in 6.4 miles. Unlike the other trails in the Cross Canyon Corridor Historic District, the upper portion of the South Kaibab Trail is often located on exposed ridgelines rather than within the bottom of drainages. Nearly one quarter of the trail's total elevation is descended from the South Rim to Cedar Ridge. The next quarter is descended between Cedar Ridge and the Tipoff at the edge of the Tonto Plateau.

Only three flat, and relatively short, sections of trail exist between Cedar Ridge, Skeleton Point, and the Tonto Plateau (Photograph 123). The remaining portions of trail traverse steep changes in topography through the use of multiple clusters of switchbacks (Photograph 124). Rock slides and erosion problems have been common on the severely sloped portions of the trail since its construction in 1925. Ongoing maintenance to the trail's tread, as well as occasional minor re-routes, has occurred throughout the period of significance and continues to occur today.

Unlike the vernacular Bright Angel Trail, the South Kaibab Trail was an engineered trail from its very inception. The trail's tread is generally benched into the slopes and cliffs of the corridor. A typical cross section of the trail includes a shallow drainage swale on the upslope side of the tread. The swale then crosses the tread at a reinforced dip or waterway in the trail, allowing surface water to drain across the trail with minimal erosion.

In one particular location just below Skeleton Point, the trail has been constructed atop of interlaced wood logs, creating a distinct and rustic sub-structure for the elevated trail. At the connection to the south end of the Kaibab Suspension Bridge, a tunnel has been excavated to allow the trail to proceed at the same elevation as the bridge.



Photograph 123. Relatively flat area of the South Kaibab Trail near Skeleton Point, facing northeast, 2011. Source: LSD.



Photograph 124. View of switchbacks descending Skeleton Point, facing northeast, 2011. Source: LSD.

Since its construction, the corridor's topographic alignment has provided little variety in microclimatic conditions. The corridor is exposed to sun throughout most of the day, resulting in disadvantageous use of the trail during the hot, dry summers. During winter months however, the South Kaibab Trail is often advantageous due to the sun exposure's tendency to melt snow from the trails tread at a time when other Cross Canyon Corridor trails have snow cover.

CONTRIBUTING FEATURES:

1. Coconino Plateau
2. Steeply sloped section of trail from trailhead to Cedar Ridge
3. Relatively flat topography of Cedar Ridge
4. Steeply sloped section of trail from Cedar Ridge to Tonto Plateau
5. Tonto Plateau
6. Steeply sloped section of trail from Tonto Plateau to Silver Bridge
7. Varied topography along entire trail length

NON-CONTRIBUTING FEATURES:

1. Topographic features related to contemporary trail gradient and cross-slope (stone steps, free standing walls, retaining walls, edging, drainage crossings)

NORTH KAIBAB TRAIL LANDSCAPE AREA

The North Kaibab Trail Landscape Area extends from the North Rim to the south end of the Kaibab Suspension Bridge at the Colorado River covering approximately 14.5 miles in 5,841 feet of elevation. Two thirds of the corridor's elevation change occurs in the first 5.7 miles of trail, at which point the trail reaches the Roaring Springs Pumphouse. This stretch of trail follows a continuously steep grade and continues to present maintenance challenges, requiring ongoing tread and edge repairs from rock slides and erosion. The portion of the trail

passing through the Redwall rock formation represents one of the most dramatic re-routes requiring the greatest alteration of the natural topography; along this segment, the trail has been literally carved out of the cliff face (Photograph 125). In many other areas, the North Kaibab Trail has been benched along the southwestern slopes of Roaring Springs Canyon, with little noticeable alteration to the Canyon's topography.



Photograph 125. Portion of the North Kaibab Trail passing through the Redwall formation, facing northeast, 2011. Source: LSD.

The cross section along the North Kaibab Trail of trail is generally flat with stone or log water bars laid across the trail to facilitate drainage. The trail is often lined with rock and is occasionally lined with wood logs. In areas of the trail below Supai Tunnel, rock outcroppings have constrained the opportunity to bench the trail into the slope. At these locations, the rock face has been excavated to allow the trail to pass under a rock ledge. At the Supai Tunnel, the rock has been excavated so that the trail passes directly through the bedrock. The trail above the tunnel generally has a softer sand/dirt tread, while the tread below the tunnel consists mostly of crushed rock. This section of trail also includes the steel Bridge in the Redwall footbridge, which spans Roaring Springs Canyon.

The remaining 8.8 miles of the North Kaibab Trail from the Roaring Springs Pumphouse to the Kaibab Suspension Bridge follow a relatively even, moderate grade. In many locations along this section of trail, alterations to the existing topography are minimal and the trail either follows existing grades or is benched into the side slopes of Bright Angel Canyon. The typical trail cross section of the trail at this stretch involves a generally flat cross-slope with stone or log water bars placed across the trail's tread to facilitate. Several small steel footbridges exist along this section of the trail to span Bright Angel Creek. The trail crossing at Wall Creek lies atop a thick concrete and rock retaining wall, which supports the trail and prevents erosion at the creek crossing (Photograph 126). In two particular locations, the trail is constructed on top of rock gabions, which support the trail while allowing moisture in wetland areas to flow through the gabions.

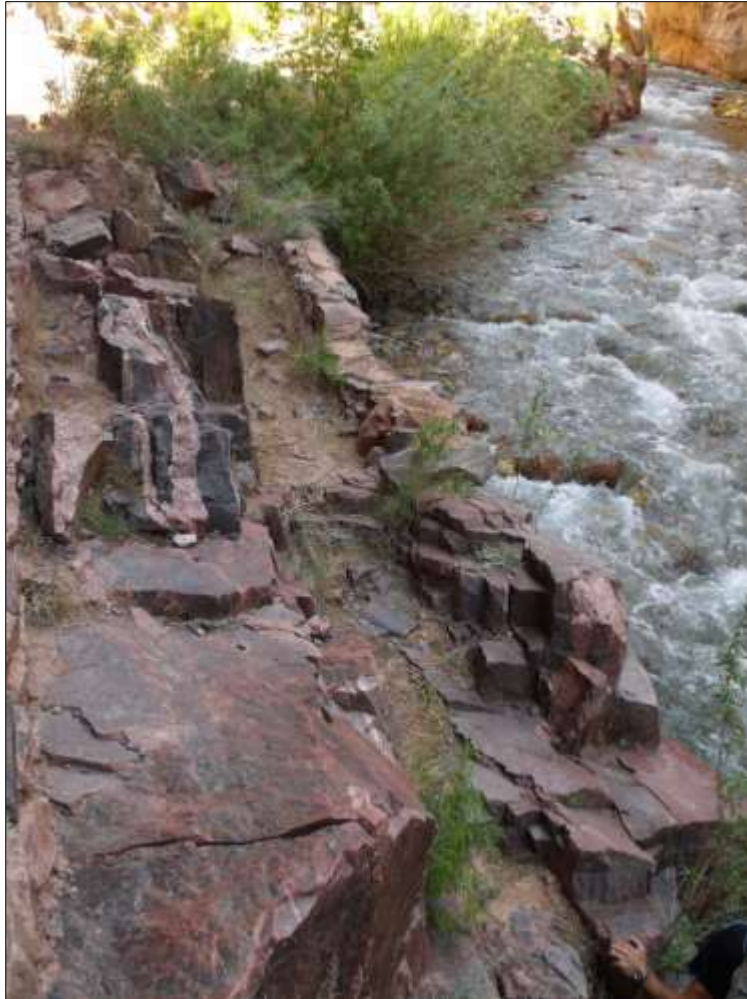


Photograph 126. Concrete and rock retaining wall at the Wall creek crossing on the North Kaibab Trail, facing east, 2011. Source: LSD.

The trail through the narrow canyon formation known simply as "The Box" has historically been re-constructed and re-routed more than any other area of the Cross Canyon Corridor. The force of the water that passes through this constricted canyon during heavy rain events has continuously damaged or else completely washed away sections of the North Kaibab Trail. The most extensive damage occurred during the flood of 1966, in which Bright Angel Creek rose to 30 feet above its normal level over the course of three days, obliterated much of the trail and all of the wooden bridges in The Box. This area along the North Kaibab Trail is one of the few areas in the Cross Canyon Corridor Historic District in which the walls supporting the trail have been mortared, in order to protect them from the waters of the creek.

Visible signs of prior re-routes are noticeable in this section of trail, as lower alignments are visible and tops of retaining walls are sometimes imbedded through the tread of the current trail (Photograph 127). In several areas, rock outcroppings have constrained the opportunity to bench the trail into the slope. At these locations, the rock face has been excavated to allow the trail to pass under a rock ledge.

The most level section of the North Kaibab trail extends from the north end of the Phantom Ranch Landscape Area, past the Bright Angel Campground Landscape Area to the Kaibab Suspension Bridge. Here, the trail parallels Bright Angel Creek through a relatively flat section at the bottom of Bright Angel Canyon and eventually runs parallel to the Colorado River on the Bright Angel Creek Delta.



Photograph 127. Abandoned trail segment and stone wall along the current alignment of the North Kaibab Trail, facing east, 2011. Source: LSD.

The general topography of the area through which the North Kaibab Trail passes lends itself well to its use as a transportation corridor. Following the alignment of the Bright Angel Fault and Roaring Springs Canyon, the topography presents one of the few locations in which a trail can reasonably descend the North Rim. Before USGS geographer Francois E. Matthes and his survey crew first used the route in 1902, Native American Tribes followed the same general alignment. Recreationists now take advantage of the well maintained trail for access to the Colorado River from the North Rim.

CONTRIBUTING FEATURES:

1. Kaibab Plateau
2. Steeply sloped section of trail from Kaibab Plateau to the Roaring Springs Pump House Residence
3. Moderately sloped section of trail from Roaring Springs Pump House Residence to north end of Phantom Ranch
4. Slightly sloped section of trail from north end of Phantom Ranch to Kaibab Suspension Bridge
5. Varied topography along entire trail length

NON-CONTRIBUTING FEATURES:

1. Topographic features related to contemporary trail gradient and cross-slope (stone steps, free standing walls, retaining walls, edging, drainage crossings)

PHANTOM RANCH AND BRIGHT ANGEL CAMPGROUND LANDSCAPE AREAS

The Phantom Ranch Landscape Area is bisected by the North Kaibab Trail. This landscape area extends from the edge of the Colorado River north approximately 1 mile to the northern boundary of Ranch development. The topography of this area includes the flat to gently sloped Bright Angel Creek delta, and the flat valley bottom of Bright Angel Canyon and is surrounded on both sides by vertical canyon walls. Bright Angel Creek passes through the canyon bottom and its steep sidewalls have been reinforced with wire mesh in many areas to control erosion and rockfall. The Bright Angel Campground Landscape Area is located directly adjacent to the east side of the Phantom Ranch Landscape Area, on a narrow, flat bench just above Bright Angel Creek. The western wall of Bright Angel Canyon rises abruptly from the flat campground.

CONTRIBUTING FEATURES:

PHANTOM RANCH LANDSCAPE AREA

1. Slightly sloped to relatively flat valley bottom of Bright Angel Canyon

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

1. Slightly sloped to relatively flat valley bottom of Bright Angel Canyon

NON-CONTRIBUTING FEATURES:

PHANTOM RANCH LANDSCAPE AREA

1. Topographic features related to contemporary trail gradient and cross-slope (stone steps, free standing walls, retaining walls, edging, drainage crossings)

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

1. Topographic features related to contemporary trail gradient and cross-slope (stone steps, free standing walls, retaining walls, edging, drainage crossings)

COTTONWOOD CAMPGROUND LANDSCAPE AREA

The Cottonwood Campground Landscape Area is bisected by the North Kaibab Trail, with leveled camp sites located on both sides of the trail. This landscape area stretches approximately 0.2 miles along the moderate canyon side slope of Bright Angel Canyon. An unnamed wash also bisects this landscape area, at a more or less perpendicular angle with the North Kaibab Trail. A storage building and corral are located to the north of the unnamed wash, adjacent to the mule stock camp site. Several buildings are located in the southern third of the landscape area, including the Cottonwood Ranger Station (#9441). A leveled helicopter pad is also located within the landscape area—between Bright Angel Creek and the North Kaibab Trail.

CONTRIBUTING FEATURES:

1. Moderate canyon side slope of Bright Angel Canyon
2. Unnamed wash bisecting site

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

1. Topographic features related to contemporary trail gradient and cross-slope, including drainage structures
2. Topographic features related to contemporary gradient of camp sites and helicopter pad

ROARING SPRINGS LANDSCAPE AREA

The Roaring Springs Landscape Area is located along the North Kaibab Trail. This landscape area stretches approximately 0.8 miles along the steeply sloped southwestern side of Roaring Springs Canyon and the western side of Bright Angel Canyon at the confluence of these two deeply incised formations. The Roaring Springs Day Use Area is located at the northernmost extent of the landscape area, at the bottom of Roaring Springs Canyon and just upstream from the various natural springs that are collectively referred to as Roaring Springs. The Day Use Area is connected to the North Kaibab Trail by an unnamed trail that is benched into the southwestern slope of Roaring Springs Canyon. The Roaring Springs Pumphouse is located approximately 0.2 miles southeast of the Day Use Area, near the center of the Roaring Springs Landscape Area. A narrow and unmarked spur trail resembling a game trail leads from the North Kaibab Trail to the Pumphouse. This trail generally follows a ridge of Roaring Springs Canyon which changes minimally in elevation. The Roaring Springs Pumphouse Operator's Residence is located at the southernmost extent of the landscape area, overlooking Bright Angel Creek to east. The Pumphouse Operator's Residence is considerably lower in elevation than the Roaring Springs Rest Area.

CONTRIBUTING FEATURES:

1. Steep canyon side slopes of Roaring Springs Canyon and Bright Angel Canyon

NON-CONTRIBUTING FEATURES:

2. Topographic features related to contemporary trail gradient and cross-slope (stone steps, free standing walls, retaining walls, edging, drainage crossings.)

12. VEGETATION:

The Cross Canyon Corridor Historic District traverses four basic plant communities, which align closely with the biotic communities identified in Brown's (1994) *Biotic Communities, Southwestern United States and Northwestern Mexico*. The boundaries of these communities are generally determined by climatic conditions—primarily those of temperature and precipitation; boundaries are therefore often tenuous and determined by local phenomena such as elevation, longitude, slope exposure, geomass, temperature inversions, cold air drainages, and soil type. The biotic communities that the Cross Canyon Corridor traverses are the Petran Montane Conifer Forest, Great Basin Conifer Woodland, Great Basin Desertscrub, and Mohave Desertscrub communities.

The Petran Montane Conifer Forest biotic community is located on the plateaus of both the North and South Rims, and is generally within the elevation range of 7,000–8,700 feet above mean sea level (amsl). The dominant plants in this community are Ponderosa pine, Douglas fir, white fir, limber pine, aspen, gambel oak, maple, spruce, locust, and fern. Within this community are two major sub-communities, both of which appear in the Cross Canyon Corridor. The first sub-community, occurring at lower elevations, is essentially a Ponderosa pine forest, as seen on the Coconino Plateau of the South Rim. The higher elevations of the Kaibab Plateau on the North Rim represent a cooler climate mixed conifer forest of Douglas fir, white fir, limber pine, and aspen.

As one descends over the rim of the Canyon, the vegetative community quickly transitions to Great Basin Conifer Woodland. This community is generally found in elevations ranging from 5,000–7,500 feet amsl, and is dominated by Pinyon pine and Utah Juniper. Other common species include rabbitbrush, winterfat, shadscale, sagebrush, blackbrush, gambel oak, mountain mahogany, sumac, serviceberry, currants, Mormon tea, Utah agave, yucca, and cliffrose.

The extreme elevation and temperature change associated with descending the Cross Canyon Corridor is mirrored by a change from a Great Basin Conifer Woodland to Great Basin Desertscrub biotic community. This community is dominated by sagebrush, shadscale, winterfat, blackbrush, greasewood, and rabbitbrush. Additional species common to the community are saltbush, catclaw, mesquite, brittlebush, cholla, prickly pear, yucca, agave, and datura. The elevation range for this cold-temperate desertland is generally from 4,000–7200 feet amsl.

The biotic community at the base of the Cross Canyon Corridor is the Mohave Desertscrub community. This warm-temperate desertland is known as an intermediate classification between the Great Basin Desertscrub and Sonoran Desertscrub communities. The transition from the Great Basin Desertscrub to the Mohave Desertscrub community is a gradual transition, with many shared species between the two communities. Dominant plants in this community include creosote, white bursage, saltbush, brittlebush, desert holly, white burrobush, shadscale, and blackbrush. The Mohave Desertscrub biotic community is generally found between the elevations of 2,000–5,000 feet amsl.

Within several of the biotic communities along the corridor, water features have created opportunities for riparian vegetation to thrive. Plants found within these areas include Fremont cottonwood, willow, tamarisk (exotic), arrowweed, mesquite, catclaw, horsetail, cattail, box elder, mosses, algae, maidenhair fern, yellow columbine, and monkeyflower. Most undisturbed areas within the Cross Canyon Corridor Historic District have retained their basic vegetative condition since the period of significance. Exceptions to the native vegetative conditions include exotic plants such as Bermuda grass, which was more than likely brought in by pack animals via seeds in their food or waste. In riparian areas, invasive plants such as tamarisk and Russian olive have also altered the vegetative conditions. Although tamarisk first appeared in the Canyon in the 1920s and 1930s, it did not become a dominant riparian species until Glen Canyon Dam was completed in 1963. Tamarisk may have been present during the period of significance, but not in the density observed today. Changes in plant densities have also likely occurred where concentrated drainage from trail construction has created an increase in moisture (i.e., swales, dip crossings, low points).

Several developed areas along the corridor have not retained their vegetative conditions from the District's period of significance. The overhead canopy of trees associated with the northern half of Phantom Ranch, for example, differs considerably from the original natural desert vegetation present during the period of significance.

Numerous plant materials were introduced into the District during the period of significance, including cottonwood, sycamore, redbud, pomegranate, apple, and fig trees. Some of these trees were likely planted during the period of significance, as developers of the canyon during that era strived to provide shade and food to visitors.

BRIGHT ANGEL TRAIL LANDSCAPE AREA

Stretching from the South Rim to the Colorado River, the Bright Angel Trail Landscape Area crosses each of the four biotic communities. The vegetation of the Petran Montane Conifer Forest is primarily found at the trailhead, atop the South Rim of the Canyon. As one makes a descent over the edge of the South Rim, this Ponderosa pine forest vegetation promptly transitions to pinyon and juniper vegetation of the Great Basin Conifer Woodland (Photograph 128). Approximately 0.5 miles south of Indian Garden, the pinyon and juniper vegetation is replaced by Great Basin Desertscrub vegetation such as sagebrush, rabbitbrush, and prickly pear. Between the Tonto Plateau and the Colorado River, the vegetation gradually transitions from Great Basin Desertscrub to creosote, saltbush, and other species common to the Mohave Desertscrub community.



Photograph 128. Transition from Petran Montane Conifer Forest biotic community on South Rim to Great Basin Conifer Woodland just below the rim, looking west, 2009. Source: LSD.

Natural plant densities increase near Garden Creek and Pipe Creek, as well as within some of the dry by cottonwood trees and willow. These riparian areas along the trail provide a microclimate that tempers the extreme temperatures of the Great Basin Desertscrub community.

The Bright Angel Trail Landscape Area generally remains in its native vegetative condition, aside from the accidental introduction of exotic plants such as Bermuda grass. A number of plants along the trail have also been purposely introduced; these include cottonwood, redbud, and fig trees. These species are similar to those that were planted during the period of significance, but it is unknown if the trees date from the period of significance.

CONTRIBUTING FEATURES:

1. Petran Montane Conifer Forest biotic community
2. Great Basin Conifer Woodland biotic community
3. Great Basin Desertscrub biotic community
4. Mohave Desertscrub biotic community
5. Riparian vegetation along Garden Creek and Pipe Creek
6. Possible cottonwood, redbud, fig, and grape vines planted during the period of significance

NON-CONTRIBUTING, COMPATIBLE:

1. Cottonwood, redbud, fig, and grape vines planted outside the period of significance

NON-CONTRIBUTING FEATURES:

1. Bermuda grass

INDIAN GARDEN LANDSCAPE AREA

The Indian Garden Landscape area is located within the Great Basin Desertscrub biotic community (Photograph 129). The following discussion of vegetation within the Indian Garden Landscape Area is adapted largely from the *Indian Garden Cultural Landscape Report* (JMA 2005).



Photograph 129. Great Basin Desertscrub biotic community at Indian Garden, looking north, 2009. Source: LSD.

During the period of significance, three types of vegetation existed in Indian Garden: native brush and riparian vegetation; vegetation that was cultivated for food; and vegetation that was introduced to the site to provide shade and stabilize slopes.

Cultivated vegetation occurred during the Cameron years in the form of vegetable plots and alfalfa for mule feed. The NPS revitalization efforts removed the vegetable and alfalfa plots. At present, no cultivated vegetation exists at Indian Garden.

Historic photographs show that the coverage of native riparian vegetation increased over the years during Indian Garden's period of significance. The NPS may have intentionally fostered the growth of native vegetation, in order to provide visitors with cooling shade. Although we know that the density and coverage of native vegetation increased between Cameron's tenure in Indian Garden and the NPS years of the period of significance, it is not known to what extent native vegetation trends have been altered in the years since the period of significance. It is likely, however, that vegetation density continued to increase, particularly in the current Day Use Area and North Indian Garden Area landscape character areas. These areas were once more open and not as densely vegetated than they appear at present, and they possibly may have been irrigated with canals. When the Niobrara ambersnail, an endangered snail species, was thought to have been discovered in the Day Use Area in the 1990s, all use and alterations of the space were forbidden. Rangers and maintenance personnel were not permitted to maintain the area, vegetation was allowed to grow unchecked, and this landscape character area now has qualities similar to that of a wetland.

Prior to the prohibition of exotic species in the park, certain non-native plants were installed in Indian Garden. Himalaya blackberry (*Rubus procerus* syn. *R. discolor*) and raspberry (*Rubus* sp.) were listed on a 1935 planting list. At present, only the Himalaya blackberry plants are observed on-site. Native plants were also transplanted into Indian Garden to increase shade and provide erosion control along the banks of Garden Creek. In the same 1935 plant list, redbuds (*Cercis occidentalis*), burro bush (*Ambrosia dumosa*), grapes, and willows were designated. The latter two plants may be the Arizona grape (*Vitis arizonica*) and seep willow (*Baccharis salicipholia*) that are both native to the region. Many of the plants on the list, except the burro bush, were observed during fieldwork, but it is not known if they were installed as part of the 1935 planting effort. Additionally, Ralph Cameron planted native cottonwood trees (*Populus fremontii*) at Indian Garden to create shade for his customers. His tree rows, once located between tent frames in the early part of the period of significance, are discernible as one of the few remnants of the Cameron era in Indian Garden. He also planted numerous fruit trees for visitor consumption; with the exception of one peach tree, the orchard no longer exists today.

Due to the lack of formal, geometric planting designs and the use of native plants in the 1935 planting plan, it is likely that the NPS designers followed rustic-style design principles of the time. The vegetation in the planting plan appears to have been sited to both prevent erosion and to blend into the landscape. These landscape architecture principles are still visible. Mature vegetation appears to be located “naturalistically,” rather than as part of a formal design, while new plant installations follow similar principles.

CONTRIBUTING FEATURES:

ADMINISTRATION AREA

1. Great Basin Desertscrub biotic community
2. Riparian vegetation in Administration Area
3. Cottonwood trees in Day Use Area
4. Riparian vegetation in Pump Station and Corral Area
5. Cottonwood trees in Pump Station and Corral Area
6. Redbud tree in Pump Station and Corral Area
7. Riparian community vegetation in the North Indian Garden Area
8. Cottonwood trees in the North Indian Garden Area
9. Himalaya blackberry in the North Indian Garden Area—cleared
10. Peach trees planted by Cameron during the period of significance

NON-CONTRIBUTING FEATURES:

1. Riparian community vegetation in the Day Use Area

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Transplanted native vegetation in the Administration Area
2. Re-vegetation in the Administration Area
3. Transplanted native vegetation in the Campground Area

COLORADO RIVER TRAIL LANDSCAPE AREA

The Colorado River Trail Landscape Area is located within the Mohave Desertscrub biotic community, and includes mostly native vegetation (Photograph 130). Common species along the trail include Mormon tea, creosote, catclaw, saltbush, and clumping grasses. These species are similar to those present during the period of significance. The tamarisk that lies between the trail and the Colorado River is an exotic plant that may also have been present in the area during the period of significance.



Photograph 130. Mohave Desertscrub biotic community and sand dunes along Colorado River Trail, looking east, 2009. Source: LSD.

CONTRIBUTING FEATURES:

1. Mohave Desertscrub biotic community
2. Tamarisk trees in densities equal to those during the period of significance

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Tamarisk trees in densities exceeding those during the period of significance

SOUTH KAIBAB TRAIL LANDSCAPE AREA

This landscape area extends from the South Rim to the southern terminus of the Kaibab Suspension Bridge, and passes through each of the four biotic communities. The trailhead is located on the edge of the South Rim, and is surrounded by vegetation of the Petran Montane Conifer Forest biotic community. This portion of the biotic community is dominated by Ponderosa pine. As one descends over the South Rim, the fairly dense Ponderosa pine transitions to the pinyon and juniper vegetation that characterizes the Great Basin Conifer

Woodland (Photograph 131). The pinyon and juniper vegetation subsides just to the south of Skeleton Point, and is replaced by the sagebrush, rabbitbrush, ocotillo, yucca, and prickly pear vegetation indicative of the Great Basin Desertscrub biotic community. A gradual transition from the Great Basin Desertscrub community to the Mohave Desertscrub community occurs between the Tonto Plateau and the Colorado River, and saltbush, brittlebush, saltbush, catclaw, and other species common to the Mohave Desertscrub community dominate the landscape.



Photograph 131. Scattered pinyon and juniper vegetation of the Great Basin Conifer Woodland biotic community on O'Neil Butte, looking north, 2011. Source: LSD.

Little if any riparian vegetation occurs within the South Kaibab Trail Landscape Area due to the orientation of the trail outside of drainages and atop ridgelines. Riparian vegetation can, however, be seen in adjacent landscape areas along the Colorado River corridor.

Aside from possible areas of additional clearing and trampling at Cedar Ridge and the Tonto Plateau Rest Area, the vegetation of this landscape area generally remains in its native vegetative condition.

CONTRIBUTING FEATURES:

1. Petran Montane Conifer Forest biotic community
2. Great Basin Conifer Woodland biotic community
3. Great Basin Desertscrub biotic community
4. Mohave Desertscrub biotic community

YAKI POINT (SOUTH KAIBAB TRAILHEAD) LANDSCAPE AREA

The Yaki Point (South Kaibab Trailhead) Landscape Area is located on the South Rim, overlooking the Canyon to the north. The vegetation in this area is part of the Petran Montane Conifer Forest biotic community, and is dominated by fairly dense and uniform Ponderosa pine cover (Photograph 132). The pine vegetation at Yaki Point has been cleared in many areas to allow for buildings, structures, roads, and a parking area. Grasses and perennial groundcover vegetation are also common in the areas surrounding the buildings and structures. The vegetation at Yaki Point is similar to that which existed in the period of significance, but may be more open in appearance due to additional clearing for modern facilities such as the parking area.



Photograph 132. Ponderosa pine vegetation of the Petran Montane Conifer Forest biotic community surrounding informational signage within the Yaki Point (South Kaibab Trailhead) Landscape Area, looking north, 2011. Source: LSD.

CONTRIBUTING FEATURES:

1. Petran Montane Conifer Forest biotic community
2. Grasses and perennial groundcover around buildings and structures

NORTH KAIBAB TRAIL LANDSCAPE AREA

The North Kaibab Trail Landscape Area possesses more diverse vegetation than any of the other landscape areas. This area crosses all four of the biotic communities within the Cross Canyon Corridor Historic District as it stretches from the North Rim to the southern terminus of the Kaibab Suspension Bridge. The trailhead is located on the edge of the Kaibab Plateau in the Petran Montane Conifer Forest community. At the trailhead, the landscape area is approximately 1,000 feet higher than the trailhead at the South Rim, creating opportunities for a sub-community of cooler climate mixed conifer forest vegetation, including Douglas fir, white fir, limber pine, and aspen (Photograph 133). Near Supai Tunnel, this vegetation transitions to another sub-community of the Petran Montane Conifer Forest, that is characterized by Pinyon



Photograph 133. Mixed fir and pine vegetation of the Petran Montane Conifer Forest biotic community along the North Kaibab Trail, looking northwest, 2011. Source: LSD.

pine vegetation. The cliffs in this area are very steep, creating “pockets” of vegetation that slowly transition into the pinyon and juniper vegetation of the Great Basin Conifer Woodland biotic community. The landscape area remains within the pinyon and juniper woodland to a point approximately 0.5 miles south of the Roaring Springs Residence. From this point, the pinyon and juniper diminish into the rabbitbrush, catclaw, fairy duster, yucca, prickly pear, and skunk sumac species of the Great Basin Desertscrub biotic community. The transition from Great Basin Desertscrub to Mohave Desertscrub occurs within the landform known as “The Box.” The transition is somewhat obscured by this box canyon landform, as it offers little opportunity for anything but riparian vegetation. By the time one descends from the southern portion of The Box, the landscape is dominated by Mohave Desertscrub species such as creosote, catclaw, yucca, prickly pear, saltbush, rabbitbrush, and brittlebush.

In areas surrounding Roaring Springs Creek, Bright Angel Creek, Manzanita Creek, Wall Creek, and Ribbon Falls, natural plant densities increase due to the presence of water. A unique community of riparian plants occurs directly adjacent to and within the creeks, dominated primarily by willow. Other species found within these riparian areas include horsetail, sumac, locust, boxelder, and cattail.

The North Kaibab Trail Landscape Area is dominated primarily by native vegetation that would have appeared similar to that existing within the period of significance. One apparent area of native re-vegetation work is currently visible on the slopes near Ribbon Falls, though many other efforts have likely been made since the period of significance to stabilize banks and control along the trail.

CONTRIBUTING FEATURES:

1. Petran Montane Conifer Forest biotic community
2. Great Basin Conifer Woodland biotic community
3. Great Basin Desertscrub biotic community
4. Mohave Desertscrub biotic community
5. Riparian vegetation along Roaring Springs Creek, Bright Angel Creek, Manzanita Creek, Wall Creek, and Ribbon Falls

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Areas of native revegetation efforts, such as that evident at Ribbon Falls

ROARING SPRINGS LANDSCAPE AREA

This landscape area is located within the Great Basin Conifer Woodland biotic community, and is dominated by pinyon and juniper vegetation. The portions of the landscape area that abut Roaring Springs, Roaring Springs Creek, and Bright Angel Creek are densely vegetated with riparian vegetation, including willow, cottonwood, and boxelder (Photograph 134). The pinyon and juniper vegetation, as well as the riparian vegetation would have appeared similar during the period of significance to that which exists today, with the exception of the vegetative clearing which occurred in conjunction with construction of the Roaring Springs Pump house and Roaring Springs Rest Area.



Photograph 134. Mixed pinyon pine vegetation and riparian fringe vegetation in the Great Basin Conifer Woodland biotic community surrounding the Roaring Springs rest area, looking west, 2011. Source: LSD.

Several plantings have been added to the landscape area near the Roaring Springs Residence. Some of these, such as the large cottonwood trees, may date to the period of significance; others, such as the tall ornamental yucca and Virginia creeper are likely later additions.

CONTRIBUTING FEATURES:

1. Great Basin Conifer Woodland biotic community
2. Riparian vegetation along Roaring Springs, Roaring Springs Creek, and Bright Angel Creek
3. Cottonwood trees possibly planted during the period of significance

NON-CONTRIBUTING FEATURES:

1. Tall ornamental yucca and Virginia creeper at Roaring Springs Residence
2. Cottonwood trees planted outside the period of significance

COTTONWOOD CAMPGROUND LANDSCAPE AREA

Located within the Great Basin Desertscrub biotic community, the Cottonwood Campground Landscape Area includes vegetation such as skunk sumac, scrub oak, buckthorn, and yucca (Photograph 135). The portions of the campground that abut Bright Angel Creek are densely vegetated with riparian vegetation, including willow, cottonwood, and boxelder. The vegetative species currently in the Cottonwood Campground Landscape Area would have appeared similar to that which existed during the period of significance.



Photograph 135. Overview of Great Basin Desertscrub biotic community at Cottonwood Camp, looking north, 2011. Source: LSD.

A redbud tree and boxelder tree appear to be recent additions to the area near the Cottonwood Ranger Station. These species are native to the area and would be similar to species that may have been present during the period of significance.

CONTRIBUTING FEATURES:

1. Great Basin Conifer Woodland biotic community
2. Riparian vegetation along Bright Angel Creek

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Recently planted redbud and boxelder trees near the Cottonwood Ranger Station

PHANTOM RANCH LANDSCAPE AREA

The Phantom Ranch Landscape Area is located within the Mohave Desertscrub biotic community. Species associated with this community that are visible in the landscape area include creosote, mesquite, catclaw, prickly pear, brittlebush, Mormon tea, and rabbitbrush. Riparian vegetation is found adjacent to Bright Angel Creek and the Colorado River, and is primarily dominated by willow, cottonwood, and horsetail. These plants are similar to the vegetation that would have been seen by visitors to Phantom Ranch during the District's period of significance.

Cottonwood trees were first planted at Phantom Ranch in 1907 by David Rust to provide shade for guests at his tourist camp. In 1922, additional cottonwood trees were added by the Fred Harvey Company in the vicinity of Colter's buildings for the same purpose. Additionally, as the ranch was designed to provide many of its own needs, an orchard of peach, plum, and apricot trees was cultivated to the south of the original Guide's Cottage, and an alfalfa field for use as livestock feed was developed south of the orchard. The trees and orchard were planted by 'Shorty' Yarberry; he also planted most of the original landscaping at the ranch and was known to some as an 'aging packer-turned-landscape-architect' (Unknown 1979; Cleeland 1986, 43). Mature cottonwood trees now dominate portions of the landscape area, providing a tall canopy that would not have been experienced by visitors to the Ranch during the District's period of significance (Photograph 136). Along with the cottonwoods, other trees have been planted in the area including sycamore, boxelder, redbud, fig, and one pomegranate tree. It is unclear how many of these trees were planted during the period of significance. Tree planting continued after the period of significance, including a total of 132 new trees planted between 1988 and 1994.



Photograph 136. Overview of Mohave Desertscrub biotic community and mature cottonwood trees at the Phantom Ranch Landscape Area, looking southwest, 2011. Source: LSD.

Other plants have also been introduced into this landscape area. Some were purposely brought to Phantom Ranch, such as grape vines and ornamental yucca near the buildings and structures. Other species were introduced accidentally, including invasive species such as tamarisk and Russian olive that have subsequently naturalized within the riparian communities.

CONTRIBUTING FEATURES:

1. Mohave Desertscrub biotic community
2. Riparian vegetation along Bright Angel Creek and the Colorado River
3. Possible cottonwood, redbud, sycamore, boxelder, fig, pomegranate, and grape vines planted during the period of significance
4. Remnant fruit trees in the area of Fred Harvey Company orchard

NON-CONTRIBUTING FEATURES:

1. Ornamental yucca planted near buildings and structures

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Cottonwood, redbud, sycamore, boxelder, fig, pomegranate, and grape vines planted outside the period of significance

MISSING FEATURES:

1. Alfalfa field

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

This landscape area is located directly adjacent to the Phantom Ranch Landscape Area, and therefore has many vegetative species in common with Phantom Ranch. The Bright Angel Campground Landscape Area is located within the Mohave Desertscrub biotic community; however, its location directly adjacent to Bright Angel Creek provides as much habitat for riparian vegetation as desertland vegetation (Photograph 137). Species within this landscape area include cottonwood, brittlebush, willow, catclaw, redbud, and locust.

The overhead canopy associated with this landscape area differs from the low desertland species that would have been exclusively present during the period of significance. Mature cottonwood trees, possibly planted within the District's period of significance, now dominate most of the landscape area. More recently, redbud trees have been planted in the southern portion of the landscape area.

CONTRIBUTING FEATURES:

1. Mohave Desertscrub biotic community
2. Riparian vegetation along Bright Angel Creek and the Colorado River
3. Possible cottonwood planted during the period of significance

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Recently planted redbud trees in the southern portion of the landscape area



Photograph 137. Mixed Mohave Desertscrub and riparian fringe vegetation at Bright Angel Campground, looking northwest, 2011. Source: LSD.

13. VIEWS AND VISTAS:

The views and vistas experienced today remain exceptionally similar to the views and vistas inhabitants and visitors may have experienced during the period of significance. It is the scale of the Canyon's escarpments, pediments, buttes, plateaus, and ridges that create and frame the views and vistas that are experienced while navigating the four trails of the Cross Canyon Corridor; the Bright Angel Trail, Colorado River Trail, South Kaibab Trail and North Kaibab Trail. These trails and the landscape areas associated with them are all locations from which the iconic imagery of the Grand Canyon is experienced.

Though the views and vistas associated with each of the landscape areas are unique, there are several similarities that are shared by types of landscape areas. In all of the landscape areas, for example, views are highly variable and are limited mostly by surrounding landforms or occasionally tall vegetation. In addition, expansive views are commonly associated with landscape areas that include portions of the Canyon Rims or the Tonto Plateau. From these landforms, the degree of enclosure is minimal and views across and within the Canyon are mostly unrestricted.

There are also similarities in views along the trail sections that contain numerous switchbacks. The switchbacks reorient users as the elevation changes and new perspectives of the same scenery are presented at every turn. As one ascends or descends the switchbacks, views are generally directional across the face of the slope. From the switchbacks, views out and down the slope are often long, revealing portions of the trail alignment below. These views act as visual cues that evoke a broader understanding of either the journey ahead, or the distance traveled. The contrasting color of the meandering trail tread is often a dominating feature of these views, along with the people (and sometimes mules) on the trail. In contrast, views into and up the slope are fairly limited. In many locations, the features of the trail above are not

visible; only figures of hikers and mules can be seen moving back and forth along the slope, accompanied by the sounds of their voices and footsteps.

Night sky views are also similar among the landscape areas, though some views are more enclosed than others. Those that are enclosed frame the night sky with rugged black canyon walls. The remoteness of the landscape areas results in very little light pollution and provides a generally clear view of the night sky. At times, the light reflected by the stars is bright enough to light the surrounding landscape. These views are essentially unchanged from those that would have been experienced during the District's period of significance.

Additional details specific to each landscape area are discussed below.

BRIGHT ANGEL TRAIL LANDSCAPE AREA

As one descends over the edge of the South Rim, the views begin to change from expansive cross-canyon views to inner-canyon views (Photograph 138, Photograph 139, and Photograph 140). This visual transition is augmented by the relative quietness of the inner canyon versus the rim's broader range of sounds. The views and vistas along the trail vary greatly depending on the surrounding canyon and plateau landforms. Views down into the Canyon provide an inclusive perspective of the trail and the landscape types it is situated in, and reveal destination points such as the 1.5-Mile and 3-Mile Rest Houses, and Indian Garden. Views of the rest houses provide visual milestones for trail users to gauge their progress to their next destination or resting point. Vistas enjoyed from the rest houses are framed by the openings in the stone walls. These openings frame both cross-canyon vistas, as well as intimate inner canyon vistas, depending on the orientation of the rest houses. It is unknown, but seems likely that the rest houses were sited with the intention to capture certain views or focal points.

Views also differ between the upper and lower sections of the trail. The section of Bright Angel Trail above the Tonto Plateau provides intermittent cross-canyon views of the North Rim. Below the Tonto Plateau, views become more enclosed due to the narrowing of the lower Pipe Creek Canyon landform and its confluence with Granite Gorge.

CONTRIBUTING FEATURES:

1. Views of and from the South Rim
2. Inner-canyon views along the upper portion of the trail
3. Cross-canyon views along the upper portion of the trail
4. Views of buildings and features at Indian Garden that date from the period of significance
5. Views of Garden Creek
6. Views from Tonto Plateau
7. Views of Tonto Trail
8. Views of the Rest Houses
9. Framed vistas from within the Rest Houses
10. Enclosed views of Pipe Creek Canyon and Granite Gorge on the lower portion of the trail
11. Views of Pipe Creek
12. Views of the Colorado River
13. Views of the Colorado River Trail

NON-CONTRIBUTING FEATURES:

1. None known

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Views of buildings and other rustic features dating from outside the period of significance

MISSING FEATURES:

1. Views from portions of the trail that have been re-routed



Photograph 138. A view of how pediments and ridges within the inner canyon frame cross-canyon views to the North Rim, along the Bright Angel Trail, facing north, 2009. Source: LSD.



Photograph 139. View looking across-canyon to North Rim with Indian Garden and Plateau Point in middle ground, facing northwest, 2009. Source: LSD.



Photograph 140. View from inner canyon “narrows” area along Bright Angel Trail, facing northeast, 2009. Source: LSD.

INDIAN GARDEN LANDSCAPE AREA

During the period of significance, when Indian Garden fell under Ralph Cameron’s management, the Indian Garden landscape was much more open and exposed. Fewer mature trees and less riparian vegetation during this time allowed for a full range of views of the site—the entire complex could be viewed from any one particular location in or adjacent to Indian Garden.

As more features were added to the Indian Garden landscape between 1927 and 1942, and the vegetation grew taller and denser, views within the site became more limited. The vegetation and buildings created visual barriers between spaces, preventing all-encompassing views of Indian Garden.

Since the period of significance, views within the area have become increasingly foreshortened and fractured. Vegetation continues to grow, both in height and density, resulting in limited viewsheds. It is now possible for a person to stand in some areas of the landscape and have no visual access to surrounding spaces. The spaces created during the 1989 rehabilitation of Indian Garden, however, afford new and different view opportunities.

The southern helicopter landing pad, in particular, provides sweeping overhead views of the entire site due to its elevated position above Indian Garden. The only views common to both the period of significance and existing conditions are the views to the surrounding canyon walls. These views have changed little over time and have been altered only by the increasing height of trees.

CONTRIBUTING FEATURES:

1. Views to surrounding canyon
2. Views of buildings and features at Indian Garden that date from the period of significance

NON-CONTRIBUTING FEATURES:

1. Views to surrounding canyon from the administration area
2. Views from helicopter landing pad
3. Views to surrounding canyon from campground area
4. Views of modern features at Indian Garden that date from outside the period of significance

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Views of rustic buildings and other features dating from outside the period of significance

MISSING FEATURES:

1. Views of historic buildings/structures that were removed

COLORADO RIVER TRAIL LANDSCAPE AREA

As its name implies, the Colorado River Trail provides intermittent views of the Colorado River and Granite Gorge from approximately 100 feet above the river (Photograph 141). In addition, as the trail alignment is confined to the river corridor by natural rock outcroppings, longitudinal views up and down the river provide a clear cross-section of the river's erosive history. Because the Colorado River trail has not been realigned since its construction by the CCC during the years between 1933 and 1941, views along the trail remain much as they did during the District's period of significance.

CONTRIBUTING FEATURES:

1. Views of Bright Angel Trail
2. Views of Pipe Creek
3. Enclosed views of Pipe Creek Canyon and Granite Gorge
4. Views of Kaibab Suspension Bridge
5. Views of Phantom Ranch
6. Views of the Colorado River

NON-CONTRIBUTING FEATURES:

1. Views of Silver Bridge

SOUTH KAIBAB TRAIL LANDSCAPE AREA

The most expansive views in the South Kaibab Trail Landscape Area are experienced from the South Kaibab Trailhead at the edge of the South Rim. As one descends over the edge of the South Rim, the views continue to be vast and expansive with isolated directional views based on the orientation of the trail's switchbacks. The first opportunity to experience a broad panoramic view from within the Canyon is at Ooh Aah Point, just above Cedar Ridge (Photograph 142). At this natural overlook, the trail extends out from the walls of the Canyon to provide wide open vistas of the cliffs, terraces, and buttes that make up the inner canyon. The vistas from this overlook are a visual cue to the grand sense of scale and the physical distance traveled on the trail.



Photograph 141. View of the Colorado River and Silver Bridge from the Colorado River Trail, looking east, 2011. Source: LSD.



Photograph 142. View of the Ooh Aah Point overlook (at center) from the South Kaibab Trail, looking north, 2011. Source: LSD.

Cedar Ridge is located just below Ooh Aah Point after a series of switchbacks that provide views back into Pipe Springs Canyon and below Mather Point. Cedar Ridge is the first designated rest area along the South Kaibab Trail, providing a moderately sized plateau for viewing distant inner canyon landforms as contrasted with the nearby views of O'Neil Butte (Photograph 143). Between Cedar Ridge and Skeleton Point, the trail descends along an exposed ridge that offers the viewer sustained panoramic views of the inner canyon.



Photograph 143. View of the inner canyon and Coconino Sandstone formation from the Fossil Fern Exhibit at Cedar Ridge, looking northwest, 2011. Source: LSD.

Skeleton Point provides the first isolated vistas of the Colorado River from high above Phantom Ranch. Below Skeleton Point, the views are directed to the east as the trail descends a slope that overlooks the Tonto Plateau. Views downward from this slope reveal the trail's alignment and expanse of switchbacks, while providing a broader understanding of the journey ahead or behind. Views up this slope reveal only the hikers and mules on the trail, with little to no visual evidence of the trail itself.

From atop the Tonto Plateau, the Tipoff rest area offers broad views in all directions and is the last open viewing platform on the South Kaibab Trail before descending to the Kaibab Suspension Bridge. As the trail enters the more enclosed landscape of Granite Gorge, views of the textures and colors of the topographic features are more evident.

Between the Tipoff and the Kaibab Suspension Bridge, the trail descends a series of steep switchbacks with intermittent views of the Colorado River, Phantom Ranch, Bright Angel Canyon, and the Silver and Kaibab Suspension Bridge (Photograph 144). These features and waypoints, and the portions of visible trail that connect them, represent visual benchmarks for the journey ahead or behind. Midway down the switchbacks, the striking views of Granite Gorge are complemented by the sounds of the Colorado River. The switchbacks terminate at the tunnel to the Kaibab Suspension Bridge, inside which the view is tightly constricted.



Photograph 144. View of the Colorado River and inner canyon from beneath the Tipoff, looking northwest, 2011. Source: LSD.

The vista at the north end of the tunnel is not necessarily planned, but offers a unique linear view down the length of the historic bridge; this view has basically remained unchanged since the bridge's construction in 1928.

CONTRIBUTING FEATURES:

1. Views of the South Rim and Yaki Point
2. Inner-canyon views along the upper portion of the trail
3. Panoramic cross-canyon views along the upper portion of the trail
4. Panoramic vistas from Ooh Aah Point
5. Panoramic vistas from Cedar Ridge
6. Views of the CCC Fossil Fern Exhibit
7. Panoramic and Colorado River vistas from Skeleton Point
8. Views of Tonto Trail
9. Views from Tonto Plateau and the Tipoff
10. Vistas of Granite Gorge, Phantom Ranch, Kaibab Suspension Bridge , and the Colorado River from Panorama Point
11. Views of Phantom Ranch
12. Views and vistas of and from within the north end of the tunnel at Kaibab Suspension Bridge
13. Enclosed views of Granite Gorge on the lower portion of the trail
14. Views of the Colorado River Trail
15. Views of the Colorado River

NON-CONTRIBUTING FEATURES:

1. Views of Silver Bridge

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Views of the composting toilet buildings and other rustic features dating from outside the period of significance

MISSING FEATURES:

1. Views from portions of the trail that have been significantly re-routed since the period of significance

YAKI POINT (SOUTH KAIBAB TRAILHEAD) LANDSCAPE AREA

The most expansive and panoramic views in the Yaki Point Landscape Area are experienced from the edge of the South Kaibab Trailhead parking area and at the kiosk located at the edge of the South Rim prior to descending the South Kaibab Trail. Views of the Canyon from within the Yaki Point Landscape Area are partially obscured by the incline of topography, large trees, and structures. Internal views associated with the landscape area include those of historic buildings and features, as well as modern buildings and features.

CONTRIBUTING FEATURES:

1. Panoramic cross-canyon views from the edge of the South Rim
2. Views of buildings and features dating from within the period of significance

NON-CONTRIBUTING FEATURES:

1. Views of the asphalt road, parking lot, and associated features
2. Views of concrete sidewalks and curbs
3. Views of asphalt Rim Trail
4. Views of modern light poles and fixtures
5. Views of the concrete restroom building
6. Views of modern steel signs and water spigots
7. Views of waste and recycling dumpsters

NON-CONTRIBUTING, COMPATIBLE FEATURES:

1. Views of buildings and other rustic features from outside the period of significance

NORTH KAIBAB TRAIL LANDSCAPE AREA

The views of the Canyon from the North Kaibab trailhead area are obscured by the dense evergreen forest that surrounds the area. As one descends from the North Rim, the views continue to be limited, with linear views restricted to the cleared path that the trail's construction has created in the dense tree cover. Occasional breaks in the tree canopy provide intermittent framed views out toward the upper portions of Roaring Springs Canyon. The first opportunity on this trail to experience a broad panoramic vista from within the Canyon is at the Coconino Overlook, approximately 500-feet below the North Rim (Photograph 145).

At this natural overlook atop the Coconino Sandstone geological formation, one can view the cliffs, terraces, and buttes that make up Roaring Springs Canyon. This vista evokes a grand sense of scale like none other in the Cross Canyon Corridor. From this overlook, a vast expanse of the Canyon can be seen at a viewpoint that is more than 500 feet higher than any of the viewpoints at the South Rim. This view is also unique due to its alignment with the San Francisco Peaks in Flagstaff, Arizona. The sometimes snow-covered peaks are located on a direct axis with the vista looking down Roaring Springs Canyon, and provide a dramatic focal point.

As one descends toward Supai Tunnel, a series of switchbacks provide views back towards the top of Roaring Springs Canyon and the North Rim. Supai Tunnel is the first designated rest area along the North Kaibab Trail, providing an opportunity for users to explore and photograph the distant views and vistas down Roaring Springs Canyon. Between Supai Tunnel and the Bridge in the Red Wall, the trail descends the steep switchbacks of Roaring



Photograph 145. View of Roaring Springs Canyon from the Coconino Overlook along the North Kaibab Trail, looking northwest, 2011. The snow-capped San Francisco Peaks are visible near the top right of the photograph. Source: LSD.

Springs Canyon. Hikers enjoy consistent views of the inner canyon, as well as the expansive views of the canyon walls (Photograph 146). These views offer closer views of the vegetation, geology and erosion patterns in this portion of the Canyon.

From below the Bridge in the Redwall, views toward the rim reveal little evidence of the trail, other than the sounds and sights of hikers moving back and forth across the steep slopes of Roaring Springs Canyon. The center of the bridge is a natural stopping point to enjoy an open vista down Bright Angel Canyon, though it is unknown whether this view was planned. As the trail descends along the exposed cliff faces of the Redwall geologic formation toward the Roaring Springs Landscape Area, it offers continuous views of Roaring Springs and Bright Angel Canyons. Views of the Roaring Springs create a focal point near the confluence of Roaring Springs and Bright Angel Canyons.

Views from the trail as it passes between Roaring Springs and Cottonwood Campground are enclosed within Bright Angel Canyon. The trail generally parallels Bright Angel Creek in this location, and sounds of the creek augment views of rushing water that can be seen from the trail (Photograph 147).

Located approximately two tenths of a mile west of the North Kaibab Trail, Ribbon Falls also draws attention as a focal view. An unimproved spur trail and footbridge over Bright Angel Creek offer close access to the falls, leading to some of the most spectacular enclosed views within the Cross Canyon Corridor. The views of and from behind the falls are a unique feature of the corridor, and offer sights and sounds of falling water, along with an oasis of rich green vegetation and colorful flowers that contrast with the surrounding desert environment.



Photograph 146. View of Roaring Springs Canyon from below the Supai Tunnel, looking southeast, 2011. The Bridge in the Redwall is visible to the right of the photograph. Source: LSD.



Photograph 147. View of Bright Angel Canyon from along the North Kaibab Trail, looking northeast, 2011. Source: LSD.

From the Cottonwood Campground Landscape Area to the north end of the enclosed box canyon landform known as 'The Box', lower canyon walls and a wide valley floor create a sense of openness along the trail, presenting long views toward the South Rim down Bright Angel Canyon. Views up the canyon are limited by landforms such as the Walhalla Plateau and Clement Powell Butte. Views from within The Box are short and enclosed and contrast sharply with open panoramic portions of the trail (Photograph 148). The sounds and sights of rushing water dominate this portion of trail. Numerous footbridges cross Bright Angel Creek within The Box, offering opportunities to view the creek from just above the moving water. The perspective of views throughout "The Box" differs from those during the period of significance because the trail bed was raised after the 1966 flood.

As the trail slowly descends through Phantom Ranch to the Kaibab Suspension Bridge, it provides a broad view of Granite Gorge and distant views up toward the South Rim. Views upriver from the Bright Angel Creek Delta capture the contrast of the Kaibab Suspension Bridge with the rugged walls of Granite Gorge. This view has changed little since the bridge was constructed in 1928.



Photograph 148. View of the Canyon from within “The Box” formation along the North Kaibab Trail, looking north, 2011. Source: LSD.

CONTRIBUTING FEATURES:

1. Enclosed views in the heavily wooded section of trail directly below the trailhead
2. Cross-canyon vistas from Coconino Overlook
3. Views of Roaring Springs Canyon
4. Views of and from within Supai Tunnel
5. Views of Roaring Springs
6. Views of Bright Angel Canyon
7. Views of Bright Angel Creek
8. Views of Walhalla Plateau, Clement Powell Butte, the Transept, The Box, and other landforms along the trail
9. Views of the Cottonwood Ranger Station and other features in the Cottonwood Campground Landscape Area dating from the period of significance
10. Views of Wall Creek
11. Views of Ribbon Falls
12. Views of Phantom Canyon and Phantom Creek
13. Views of buildings and features in the Phantom Ranch Landscape Area dating from the period of significance
14. Views of and from Kaibab Suspension Bridge
15. Views of Granite Gorge

NON-CONTRIBUTING FEATURES:

1. Views of modern buildings and features in the Roaring Springs Landscape Area dating from outside the period of significance
2. Views of modern features in the Cottonwood Campground Landscape Area dating from outside the period of significance
3. Views of the reinforced banks of Bright Angel Creek through the Phantom Ranch Landscape Area
4. Views of the modern aluminum bridge at the north end of the Bright Angel Campground Landscape Area
5. Views of modern features in the Phantom Ranch Landscape Area dating from outside the period of significance
6. Views of Silver Bridge

NON-CONTRIBUTING, COMPATIBLE FEATURES

1. Views of the Roaring Springs Residence, and other rustic structures and features in the Roaring Springs Landscape Area
2. Views of rustic buildings and features in the Cottonwood Campground Landscape Area dating from outside the period of significance
3. Views of rustic buildings and features in the Phantom Ranch Landscape Area dating from outside the period of significance
4. Views of the Bright Angel Archaeological Site
5. Views of and from the Bridge in the Redwall, and all other rustic footbridges along the trail from outside the period of significance

MISSING FEATURES:

1. Views of and through the Eye of the Needle tunnel, which fell into the canyon sometime after the period of significance
2. Views from portions of the trail that have been significantly re-routed since the period of significance

ROARING SPRINGS LANDSCAPE AREA

The views associated with the Roaring Springs Landscape Area are generally directed toward the east-facing slope of the Canyon. The Roaring Springs Rest Area at the north end of the landscape area is partially enclosed by tall tree cover, limiting views of the surrounding canyon walls. From the Roaring Springs Pump house, the sounds and sights of the springs are a focal point, though existing overhead power lines partially impair views to the north and west. At the southern end of the landscape area, the Roaring Springs Residence offers both enclosed and open views. Tall trees south of the residence limit views of the canyon in that area, while views from the heliport open up to reveal views up and down Bright Angel Canyon. Views up the canyon include Uncle Jim Point, at the confluence of Bright Angel and Roaring Springs Canyons. Internal views associated with the landscape area include those of historic features, such as the Union Pacific cable tramway remnant. Various modern buildings and features are also visible within the landscape area.

CONTRIBUTING FEATURES:

1. Views of Roaring Springs Canyon
2. Views of Roaring Springs
3. Views of Bright Angel Canyon
4. Views of Bright Angel Creek
5. Views of Walhalla Plateau and Clement Powell Butte
6. Views of the North Kaibab Trail
7. Views of the Union Pacific cable tramway remnant

NON-CONTRIBUTING FEATURES:

1. Views of modern buildings and features dating from outside the period of significance
2. Views from the helicopter landing pad

NON-CONTRIBUTING, COMPATIBLE FEATURES

1. Views of the composting toilet building, Roaring Springs Residence, and other rustic structures and features in the landscape area
2. Views of the steel footbridge just south of the Roaring Springs Residence

MISSING FEATURES:

1. Views of the original UPRR water system, including a dam on Bright Angel Creek, a sluice to a powerhouse, and a pumphouse for pumping water to the North Rim
2. Views of the UPRR cable tramway used by the railroad and NPS to deliver supplies to the Roaring Springs area

COTTONWOOD CAMPGROUND LANDSCAPE AREA

The Cottonwood Campground Landscape Area is located within a moderately enclosed section of Bright Angel Canyon that provides views up and down the canyon, as well as up the Transept Canyon formation. Vegetation within the campground often obscures views as one navigates the network of trails linking the North Kaibab Trail to the campsites. Many of the campsites provide framed views of Bright Angel Point and Manzanita Point, while others are mainly enclosed by vegetation with limited views of surrounding landforms. The canyon walls provide a uniquely framed view of night skies from the Cottonwood Campground Landscape Area, with an isolated distant light from the Grand Canyon Lodge on the North Rim acting as a visual reminder of the remoteness and isolation of the campground. Internal views associated with the landscape area include views of the historic Cottonwood Ranger station, as well as a variety of modern buildings and features.

CONTRIBUTING FEATURES:

1. Views of Bright Angel Canyon
2. Views of Bright Angel Creek
3. Views of the Transept landform
4. Views of the North Kaibab Trail
5. Views of the Cottonwood Ranger Station and other features in the Cottonwood Campground Landscape Area dating from the period of significance

NON-CONTRIBUTING FEATURES:

1. Views of modern features in the Cottonwood Campground Landscape Area dating from outside the period of significance

NON-CONTRIBUTING, COMPATIBLE FEATURES

1. Views of rustic buildings and features in the Cottonwood Campground Landscape Area dating from outside the period of significance

PHANTOM RANCH AND BRIGHT ANGEL CAMPGROUND LANDSCAPE AREAS

Due to the close proximity of these two landscape areas, the associated views associated with the Bright Angel Campground and Phantom Ranch are similar. In this area of the canyon, dense, tall tree cover limits views of the surrounding landforms. The sounds of rushing water draw most views toward the clear waters of Bright Angel Creek. The northern portion of the Phantom Ranch Landscape Area has slightly less vegetation and trees, allowing glimpses of the surrounding canyon walls (Photograph 149). Views of the historic buildings in this area evoke a sense of history, though the landscape was much less enclosed by tree cover during the period of significance. The southern portion of the Phantom Ranch Landscape Area, on



Photograph 149. View of the surrounding Canyon walls from the northern portion of Phantom Ranch, looking southwest, 2011. Source: LSD.

the delta of Bright Angel Creek, offers broad views of Granite Gorge, the Colorado River, and the Black and Silver Bridges. Internal views associated with the landscape area include views of numerous historic and modern buildings and features.

CONTRIBUTING FEATURES:

PHANTOM RANCH LANDSCAPE AREA

1. Views of Bright Angel Canyon
2. Views of Bright Angel Creek
3. Views of the North Kaibab Trail
4. Views of buildings and features in the Phantom Ranch Landscape Area dating from the period of significance
5. Views of and from Kaibab Suspension Bridge
6. Views of Granite Gorge
7. Views of the rock piers of the Rock House Bridge

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

1. Views of Bright Angel Canyon
2. Views of Bright Angel Creek
3. Views of the North Kaibab Trail
4. Views of buildings and features in the Phantom Ranch Landscape Area dating from the period of significance
5. Views of the rock piers of the Rock House Bridge

NON-CONTRIBUTING FEATURES:

PHANTOM RANCH LANDSCAPE AREA

1. Views of the reinforced banks of Bright Angel Creek through the Phantom Ranch Landscape Area
2. Views of the modern aluminum bridge at the north end of the Bright Angel Campground Landscape Area
3. Views of the Bright Angel Campground Landscape Area
4. Enclosed and limited views from Phantom Ranch due to mature vegetative growth prior to the period of significance
5. Views of modern features in the Phantom Ranch Landscape Area dating from outside the period of significance
6. Views of Silver Bridge

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

1. Views of the reinforced banks of Bright Angel Creek through the Phantom Ranch Landscape Area
2. Views of the modern aluminum bridge at the north end of the Bright Angel Campground Landscape Area
3. Enclosed and limited views from Phantom Ranch due to mature vegetative growth prior to the period of significance
4. Views of modern features in the Phantom Ranch Landscape Area dating from outside the period of significance

NON-CONTRIBUTING, COMPATIBLE FEATURES:

PHANTOM RANCH LANDSCAPE AREA

1. Views of rustic buildings and features in the Phantom Ranch Landscape Area dating from outside the period of significance
2. Views of the Bright Angel Archaeological Site

MISSING FEATURES:

PHANTOM RANCH LANDSCAPE AREA

1. Views of the CCC swimming pool, Rock House Bridge platform, and other buildings and features dating from the period of significance that have been removed

BRIGHT ANGEL CAMPGROUND LANDSCAPE AREA

1. Views of the original stone restroom structures that have since been removed

Condition Assessment

Condition Assessment

Fair

Assessment Date

2005, 2009, and 2011

Condition Assessment Explanatory Narrative:

As a whole, the 2005 CLR for Indian Garden found that the portions of Indian Garden rehabilitated or developed in 1989, including the Administration Area and the Pump Station and Corral Area, were in good condition at that time. The segment of the Bright Angel Trail Corridor within Indian Garden was found to be in fair condition, while the remaining landscape, comprising the Day Use Area and North Indian Gardens Area, was in poor condition. These two character areas exhibit clear evidence of major disturbances and rapid deterioration.

In 2010, as part of CLI completion efforts, the condition of the entire Bright Angel Trail and Colorado River Trail Landscape Areas were assessed and found to be in fair condition. Ongoing erosion from visitor use and rockslides from natural forces create the need for continual maintenance along both the trail routes.

In 2011, in conjunction with the second phase of CLI completion, the condition of the Yaki Point, North Kaibab, Roaring Springs, Cottonwood Camp, Phantom Ranch, and Bright Angel Campground landscape areas were assessed and found to be in fair condition. Ongoing erosion from visitor use and rockslides from natural forces create the need for continual maintenance.

The entire alignment of the South Kaibab Trail was renovated between 2009 and 2010, and therefore, the trail was considered to be in good condition.

Impacts to Inventory Unit

Impact Type:

Erosion

External/Internal:

Internal

Impact Explanatory Narrative:

In numerous character areas, the banks of Garden Creek and Bright Angel Creek are eroded. In places, the Bright Angel Trail, Tonto East Trail, South Kaibab Trail, North Kaibab Trail and other subordinate trails are heavily eroded due to surface drainage on or near the trails. Erosion along trails creates hazards, and continual maintenance and occasional realignment is an unfortunate facet of the trails' historical development. Throughout the inventory unit, displaced soil covers up sections of stone edging along trails. Edging has rolled away in places. A large rock has also fallen onto the North Kaibab trail near The Box, creating a temporary re-route of the trail.

Impact Type:

Flooding

External/Internal:

Internal

Impact Explanatory Narrative:	Landscape areas located within Roaring Springs Canyon and along Bright Angel and Garden Creeks (e.g., Indian Garden, North Kaibab Trail, Cottonwood Campground, Bright Angel Campground, and Roaring Springs) are commonly subject to flooding. As a result, stabilization structures associated with these areas, such as retaining walls, stone and wire rip-rap, stone and log water bars, stone steps, require ongoing maintenance and replacement.
Impact Type:	Vegetation/Invasive Plants
External/Internal:	Internal
Impact Explanatory Narrative:	Numerous cottonwood trees are over-mature and exhibit signs of die-back. Exotic Himalaya blackberry planted during the historic period have become invasive. Exotic Russian Olive and tamarisk trees continue to pose a threat to existing natural systems. Control of these invasive plants creates unsightly piles of dead vegetation. Vegetation encroaches on edging of many trails throughout inventory unit, obscuring edging from view.
Impact Type:	Structural Deterioration
External/Internal:	Internal
Impact Explanatory Narrative:	At Indian Garden, deterioration was noted in stone steps to trailside shelter and at the abandoned Rehandling Pumphouse. Additionally, many of the flood walls/retaining walls documented within the Cross Canyon Corridor Historic District were damaged or deteriorating.
Impact Type:	Exposure to Elements
External/Internal:	Internal
Impact Explanatory Narrative:	Exposure to elements causes weathering in small-scale features (including wood members of picnic tables, structural deterioration in some buildings, and deterioration of wood logs used for erosion control on trails.
Impact Type:	Inappropriate Maintenance
External/Internal:	Internal

Impact Explanatory Narrative: Inappropriate preservation and rehabilitation techniques have diminished historic character of Caretaker's Residence at Indian Garden.

Impact Type: Soil Compaction

External/Internal: Internal

Impact Explanatory Narrative: Use of unauthorized trails causes damage to surrounding vegetation and creates compacted soils throughout the Cross Canyon Corridor Historic District.

Impact Type: Vandalism

External/Internal: Internal

Impact Explanatory Narrative: Vandalism to vegetation was noted in several locations along the trails of the Cross Canyon Corridor Historic District.

Treatment

Cultural Landscape Inventory Name: Cross Canyon Corridor

Cultural Landscape Inventory Number: 975142

Parent Cultural Landscape Inventory Name: Grand Canyon National Park Landscape

Parent Cultural Landscape Inventory Number: 85011

Park Name: Grand Canyon National Park

Park Alpha Code: GRCA

Park Org Code: 8210

Approved Landscape Treatment: Rehabilitation; Undetermined

Approved Landscape Treatment Completed: No

Approved Landscape Treatment Explanatory Narrative: A CLR was conducted for Indian Garden only. No other landscape treatment documents or recommendations have been prepared for the remaining landscape areas.

Approved Landscape Treatment Document: CLR

Approved Landscape Treatment Document Date: June 2005

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