

WIND CAVE ROADS AND BRIDGES
Wind Cave National Park
Hot Springs Vicinity
Custer County
South Dakota

HAER NO. SD-55

HAER SD-55

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HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Department of the Interior
1849 C Street, NW
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HISTORIC AMERICAN ENGINEERING RECORD

WIND CAVE ROADS AND BRIDGES

HAER No. SD-55

LOCATION: Wind Cave National Park, South Dakota

DATES OF
CONSTRUCTION: 1880s-1995

DESIGN: Nineteenth-century entrepreneurs, Fall River and Custer Counties,
South Dakota State Highway Commission, National Park Service,
Bureau of Public Roads

CONTRACTORS: Various

STRUCTURE
TYPE: Park road system

OWNER: National Park Service, Wind Cave National Park

SIGNIFICANCE: The Wind Cave National Park road system reflects the combined efforts of the National Park Service, the South Dakota State Highway Commission, and the Bureau of Public Roads to provide vehicular access to the scenic attractions of the Black Hills. While the park was originally known for its cave system and initial road construction was directed toward the main cave entrance, subsequent road projects facilitated efforts to develop the park's potential as a nature reserve encompassing diverse aspects of the prairie ecosystem. Wind Cave National Park roads and bridges represent a typical National Park Service approach to road construction techniques and features.

HISTORIAN: Claire Tichi, 2000

PROJECT
INFORMATION: The Wind Cave Roads and Bridges Recording Project was undertaken during the summer of 2000 and is part of the Historic American Engineering Record (HAER), a long-range program to document historically significant engineering and industrial works in the United States. HAER (Eric DeLony, Chief) is administered by the Historic American Buildings Survey/Historic American Engineering Record (E. Blaine Cliver, Chief), a division of the National Park Service, U.S. Department of the Interior. The project was funded by the U.S. Department of Transportation's

WIND CAVE ROADS AND BRIDGES

HAER No. SD-55

(Page 2)

Federal Lands Highway Program (Art Hamilton, Administrator) through the NPS Park Roads and Parkways Program (Lou DeLorme, Manager) and cosponsored by Wind Cave National Park (Linda Stoll, Superintendent).

The field work, measured drawings, historical reports, and photography were completed under the direction of Christopher Marston, Project Leader; Tim Davis, Program Historian; and Todd A. Croteau, Program Manager. The recording team consisted of Field Supervisor Chris Gray (Texas A&M University); Architects Todd Delyea (University of Idaho), Tim Grinstead and Stacey Heckaman (Montana State University), and Roger Michel (US/ICOMOS, Haiti); Landscape Architect Christine Magdalenos (Ball State University); and the NPS Cooperative Program at Montana State University (Barry Sulam, Manager). Claire Tichi (University of California—Berkeley) produced the historical report, which was edited by HAER historians Tim Davis and Justine Christianson. Large-format photography was produced by David Haas.

WIND CAVE ROADS AND BRIDGES

HAER No. SD-55

(Page 3)

Table of Contents

Wind Cave National Park	4
The Road System of Wind Cave National Park: Detailed Description	6
Early Development of Wind Cave	9
Early Development of Wind Cave National Park	11
Early Development of Park Roads: The Difficult Years	14
Automobile Tourism in Wind Cave and the Black Hills	18
Tough Times and Tenacious Struggle	21
CCC Work at Wind Cave	32
Approach Road Development	39
Post World War II Park Expansion	40
Mission 66	44
Mission 66 Planning at Wind Cave	45
Mission 66 Road Planning in Wind Cave	47
Visitor Center Bypass	48
Parking	49
Roadside Exhibits	49
Interpretive Patrol	51
Campground Development	52
The Media and the Mission 66 Campaign	55
Mission 66 Changes Under Way	56
Highway 385 Design and Relationship to National Park Service Standards	58
Selected Bibliography	62

Wind Cave National Park

Located ten miles north of Hot Springs, South Dakota, Wind Cave National Park contains an impressive array of scenic resources. The park lies at the threshold of a range of historical and recreational sites that include Custer State Park, Mount Rushmore National Monument, and Black Hills National Forest to the north, Jewel Cave National Monument to the west, and Badlands National Park to the east. While Wind Cave National Park provides an appealing route to Black Hills tourist destinations, the park has diverse attractions of its own. The park is named for its extensive cave system, but its surface topography, flora and fauna have long attracted visitors. The park road system provides motorists with views of the historic prairie landscape that once stretched across South Dakota. The forty-four square miles of rolling prairie grass uplands interspersed with forested ridges, gulches, canyons, and small mountains prepare visitors for the dense ponderosa pine forests of the Black Hills to the north. Low elevation and semi-arid conditions (annual rainfall measures 18") produce a mixed-grass prairie environment boasting a dozen grasses and sedges including blue gamma, western wheatgrass, and little bluestem as well as coneflower, pasqueflower, pricklypear cactus, and threadleaf sedge. The National Game Preserve Act of August 10, 1912, established the Wind Cave National Game Preserve within park boundaries. Since the first herd of bison, donated by the American Bison Society, arrived on the scene in 1913, herds of elk and antelope, as well as mule deer, white-tale deer, coyote, and prairie dogs, have thrived in the park's protected natural surroundings.¹

In 1903 Congress declared Wind Cave and the land above it protected "from settlement, entry, sale, or other disposal and set apart as a park." Congress formed Wind Cave National Park following federal intervention in a land dispute between rival families over the ownership of the cave and the right to capitalize on tourist revenues. The original reservation contained a small fraction of the current park acreage. The current boundaries encompass a number of later additions. The park's road system has also been expanded and improved over time. While the roads in many national parks were developed as relatively autonomous scenic tourism routes, Wind Cave National Park's roads are integral components of the regional transportation system of southwestern South Dakota.

The two main paved roadways in the park are South Dakota State Highway 385 and South Dakota State Highway 87. State Highway (SH) 385 heads north from Hot Springs and enters the southern tip of the park through Gobbler Pass. SH 385 passes over gently sloping prairie through Bison Flats until it reaches the visitor center access road three miles from the south entrance. The highway originally passed directly by the visitor

¹ For a complete description of the Wind Cave ecosystem and prairie environment, see National Park Service, *Wind Cave National Park, South Dakota. Handbook 104* (Washington, D.C.: Department of the Interior, n.d.).

WIND CAVE ROADS AND BRIDGES

HAER No. SD-55

(Page 5)

center and cave entrance, but a bypass was constructed in the 1960s to improve safety and efficiency. After swinging east of the visitor center, the newer section of SH 385 turns and bears northwest, reuniting with the original roadway north of the visitor center. The terrain is more hilly on the west side of the park, and SH 387 follows along a series of more sharply graded inclines and declines with sloped embankments on either side that are frequently protected by cortan steel guard rails. SH 387 intersects with SH 87 approximately one-half mile past the visitor center road junction and reaches the park boundary approximately one mile later. It continues past the park boundary toward Jewel Cave National Monument. SH 87 takes visitors through the most rugged and heavily forested portion of the park. The road heads almost due north but includes a number of circuitous curves as it climbs over ridges and crosses several ravines before dropping into a small valley known as Reaves Gulch. After following this valley for approximately 1.5 miles, SH 87 bends slightly east, skirts the north end of Rankin Ridge and continues in a northerly direction along another small valley. A short paved spur road provides access to the Rankin Ridge Trail and Lookout Tower. The park's two most dramatic bridges, Beaver Creek Bridge and the Pigtail Bridge, are located on SH 87. Motorists pass quickly over the Pigtail Bridge and have little time to appreciate its unusual character, but the impressive open-spandrel concrete-arch Beaver Creek Bridge is dramatically displayed by a carefully configured outlook located approximately a quarter mile south of the span. Just before reaching the park's north boundary, SH 87 veers sharply to the east. After pursuing an easterly course for a little over a mile, SH 87 turns sharply northward and crosses into Custer State Park, leading toward the Needles, Mount Rushmore, and Deadwood. A modestly improved gravel road designated NPS 5 intersects with SH 87 just inside the boundary and continues eastward along the boundary line for several miles. Approximately two miles east of its intersection with SH 87, NPS 5 begins to veer south, following the Red Valley to the southeast corner of the park. Another gravel road, NPS 6, intersects with NPS 5 about a mile from the south boundary. NPS 6 climbs the ridge on the east side of the Red Valley and proceeds almost due north to the park's boundary. SH 385 covers the same ground as the early tourist and National Park roads that joined Hot Springs with the park, while Highway 87 represents the growth of the park and the impact of state highway commissions that engineered roads and bridges in order to promote tourist circulation through the Black Hills.

Interpretive plaques located throughout the park encourage motorists to pause and reflect on the surrounding scenery and natural resources. There are several types of turnouts that vary from simple parking lots to more elaborate double-entranced areas with safety islands and paved walkways. Most of these roadside pullouts and interpretive sites were developed during the 1950s with funds provided through the National Park Service's Mission 66 rehabilitation program. While there are fences around the visitor center and perimeter of the park, prairie dogs, bison, antelope, and deer are allowed to move freely across roads.

The main park highways, SH 385 and SH 87, are two-lane paved roads accommodating two-way traffic. These roads and the visitor center access road feature bituminous paving. Road and shoulder widths change throughout the park. Generally speaking, the first 6.5 miles of Highway 385 from the southern entrance are 26'-wide with a 2'-wide shoulder. The road surface on Highway 87 narrows to 21' with minimal and varying shoulder widths. North of Rankin Ridge, Highway 87 widens again to 24'. NPS 5 and 6 are both gravel roads. The Rankin Ridge trail access road has a paved width of 19'. During the 1930s, the Civilian Conservation Corps (CCC) conducted a number of projects in the southern sections of the park. Work accomplished during this period included the grading of roadbanks to improve stability and create a more attractive appearance, the obliteration of old road scars, and guardrail construction. The stone walls in the visitor center area date from this era.

The Road System of Wind Cave National Park: Detailed Description

While motorists can enter Wind Cave National Park from a number of directions, the southern approach from Hot Springs has long been considered the principal entryway. Modest signs denote the park's boundaries with Black Hills National Forest and Custer State Park, but the south entrance is demarcated by a classic National Park Service welcome sign mounted on an asymmetrical sandstone pylon. After passing this sign the road curves through the cut sandstone layers of Gobbler Pass, where an open prairie vista unfolds to the right. The curb-lined shoulders begin to narrow and the concrete curbs soon end. The road follows the curve of a hill to the right as wide bituminous shoulders contrast with the concrete surface of the first section of highway construction, which appears to be an extension of the State Highway Departments renovation of the road outside the park. Bison warnings and signs prohibiting hunting and off-road driving instruct motorists on appropriate behavior. At .5 miles the road levels out, and at .7 miles it begins a gentle incline. At this point, the Portland cement concrete surface used by state highway engineers gives way to the darker bituminous concrete pavement favored by the National Park Service. The road passes through gentle rolling prairie, widening approximately every .2 miles to provide expanded shoulders for wildlife viewing. Heading north, the road provides prairie views to the right while the left offers views of upland hills. The first of several significant roadside interpretive exhibit parking areas appears on the right at the first mile mark. A curbed gravel walkway overlooks the prairie and a rusticated sandstone pylon displays two rustic timber signs. One describes the official formation of Wind Cave National Park and the other describes the reintroduction of bison to the site. A safety island separates the parking area from the main roadway. Tall prairie grasses growing in the center of the island help to visually isolate the interpretive site from passing traffic. Many of the park pullouts employ this configuration. The second roadside exhibit, "Mineral Lick," appears on the right at 1.4 miles and offers a view of rolling prairie and animal trails leading to a mineral lick where

animals once congregated. Between the exhibit and road, another wide grass median fills a pronounced eastward bend in the road.

At 1.5 miles into the park, SH 385 begins to curve gently through embankments that have been contoured naturalistically to blend with the prairie surroundings. At 1.8 miles, the road opens on the right to a roadside interpretive exhibit about prairie restoration. Prairie overlooks in this section of the park are frequently crowded with vehicles, particularly when game herds stretch out over open grasslands, which are interspersed with ponderosa pines. Along the road and at the exhibits, storm drains prevent flooding during the frequent summer showers. The road continues up, over, and through more prairie hills. The excavations necessary to create smooth grades have been concealed by subtle efforts to replicate the rolling contours of the surrounding prairie. Asphalt erosion-control curbs frequently line the outside of the road shoulder. After driving through about three miles of prairie, motorists arrive at the visitor center sign and rustic pylon advertising cave tours and indicating the highway bypass to park headquarters. At 3.3 miles into the park, views close as the road weaves sharply through cut and banksloped passages of prairie hills intermittently lined with cortan steel guardrails. On a downward slope between the two visitor center entrances, the park water treatment facilities come into view on the right. Park maintenance buildings and the fire station can be seen to the left.

The main stopping point in the park is the visitor center, which was begun by the National Park Service (NPS) in 1935 and completed by the Civil Conservation Corps (CCC) in 1937. Cave tours begin from the visitor center, which also houses several interpretive exhibits, a gift shop, and administrative facilities. The visitor center is located on a 1.6 mile-long bypassed section of the original park roadway. The main park road was relocated in 1967. Increased traffic prompted the NPS to construct a bypass that would direct through-traffic away from the visitor center area. The visitor center parking lot was expanded at this time to accommodate the growing crowds.

As SH 385 approaches the visitor center entrance, the game fence that surrounds the headquarters area appears to the left of the highway. CCC laborers moved the park game fence from the roadside to the park periphery in the late 1930s. An extensive game fence circles the periphery of the park allowing motorists an unfettered view of roving wildlife. After passing the second Visitor Center entrance five miles into the park, with accompanying expanded road shoulders for motorist maneuverability, motorists come to a view of the Black Hills foothills, dense pine cover, and rock formations through which the road eventually winds. At the junction of SH 385 and SH 87, 5.3 miles into the park, the road makes an abrupt ninety-degree right turn, and passes an extensive interpretive area with masonry curbs and a gravel walkway that overlooks the "Little Houses on the Prairie" prairie dog exhibit. Motorists wishing to continue through the park follow SH 87 north. The road begins to climb into more hilly terrain and passes over small streams

and moderate curves. The roadbed is often cut into sidehills and surrounded by dense pine forests. Six miles into the park, SH 87 passes the Centennial Trail Head. The Centennial Trail was established in 1989 as a Trans-Black Hills hiking trail to commemorate the South Dakota centennial. Just past the trailhead SH 87 curves left. A break in the trees provides a striking view of the Beaver Creek Bridge towering over the narrow gorge it spans. Ponderosa pines begin to intermingle with the prairie grasses as the road nears the bridge. A cortan guardrail on the right gives way to the concrete open railing of the Beaver Creek Bridge, which offers glimpses of the canyon below.

Constructed by the State Highway Commission in 1929 just north of the existing Wind Cave Boundary, the open spandrel reinforced concrete bridge spans a steep gorge formed by Beaver Creek and is listed on the National Register of Historic Places. The bridge was constructed as part of a scenic road project linking Custer State Park and Wind Cave National Park. At the time of its construction the 23'-wide bridge was considered wide enough for two vehicles to pass safely, but today it is signed as a one-lane bridge. Although the span itself is straight, the two approaches curve sharply.² At 6.7 miles from the south entrance, the road again widens to two lanes, a guardrail appears on the left approach to the bridge, and the road begins a steep incline into the hills. As the road follows the edge of the woods, prairie vistas overlooking the eastern portion of the park are interpreted by yet another wayside exhibit, which focuses on the "American Elk." The exhibit features a timber rather than masonry curb to harmonize with its forested surroundings. The roadway has a very narrow shoulder at this point. It continues to follow the tree line at the edge of the prairie and then enters the forest, where trees interspersed with granitic formations surround the road on both sides. The "Ancient Foundations" interpretive site appears at the 7.7-mile marker and describes surrounding geological formations. This woodland exhibit features timber post markers, a timber-curbed gravel walkway, and an all-timber sign without the sandstone pylons used in the prairie landscape exhibits.

After passing the exhibit, the road curves right and left through rocky gulches and forested areas until it reaches Pigtail Bridge, where, at 8.1 miles, signs warn of the upcoming narrowing of the road to one lane. Constructed around 1930 and structurally altered in 1940, the Pigtail Bridge in Wind Cave National Park is one of several "pigtail" bridges in the Black Hills named for their unusual "loopover" design. Like the spiral ramps often found in parking garages, these bridges work in conjunction with tight spiral curves to affect a rapid change in elevation. Motorists traveling north on SH 87 cross the short narrow span and then make a sharp 270 degree counter-clockwise turn, passing

² For a more detailed description of Beaver Creek Bridge, see Historic American Engineering Record (HAER), National Park Service, U.S. Department of the Interior, "Beaver Creek Bridge," HAER No. SD-53.

under the span and descending in a northeasterly direction into Reaves Gulch.³ Through Reaves Gulch, the road slopes down between ravine walls, creating a more constricted feeling that offers a strong contrast to the elevated prairie vistas of the first eight miles of park road. The road continues along a downward grade until approximately the 8.2-mile mark when it begins a gentle ascent. At 9.2 miles an interpretive exhibit to the left entitled "East Meets West" describes the meeting of eastern and western flora and fauna in the Black Hills. The road then begins to curve back and forth toward a clearing as it hugs the tree line and then emerges into open grasslands where bison and other game congregate. The prairie is more hilly here and interspersed with rocks and trees. At the ten-mile mark SH 87 intersects with the Rankin Ridge Road, which provides access to a trail leading to a fire tower. At 10.3 miles the fire tower comes into view to the right. The road continues on a straight and level trajectory, passing through trees and across more prairies that offer views of distant forested hills to the west. At the twelve-mile mark, the road passes unceremoniously across a narrow two-lane cattle guard into Custer State Park.

Early Development of Wind Cave

Wind Cave National Park was established in a region that was already well known for its scenic attractions and natural wonders. While Custer City and Rapid City were largely dependent on mining and railroad economies, the nearby town of Hot Springs developed as the center of a resort community focused on the health and recreational benefits provided by the local hot springs and picturesque scenery.⁴ From 1881 to 1882, Fred T. Evans and Drs. A. S. Stewart and R. D. Jennings, both practitioners of hydrotherapy, purchased the land surrounding several hot springs and subsequently constructed a series of hotels and civic buildings constructed with the distinctive native sandstone.⁵ Evans began his career running streetcars in Sioux City, Iowa and moved on to government railroad contracts in the Black Hills. When freight service demand subsided, Evans began using his business contacts with the Milwaukee railroad to develop Hot Springs as a "mecca of recreation seekers."⁶ While the Evans Hotel contributed to the development of Hot Springs, the town did not immediately catch on as a tourist destination. Hot Springs' primary shortcoming was that it lacked the railroad connections that could

³ For a more detailed description of Pigtail Bridge, see Historic American Engineering Record (HAER), National Park Service, U.S. Department of the Interior, "Pigtail Bridge," HAER No. SD-54.

⁴ Carolyn Torma, *Wind Cave National Register of Historic Places Nomination Form* (Denver: National Park Service, 1982), 3-4.

⁵ Barbara Beving Long, *Wind Cave National Park: Historic Contexts and National Register Guidelines* (Denver: National Park Service, 1990), 10.

⁶ Badger Clark, "Hot Springs Characters," *The Black Hills Engineer* XVI, no. 1 (January 1928): 26.

quickly and easily transport visitors to enjoy the local “healing” waters. By 1886, however, the railroad had reached nearby Buffalo Gap prompting Evans, Jennings, Stewart and E. G. Dudley to form the Dakota Hot Springs Company in the same year. These entrepreneurs launched a broad campaign that employed advertising and newspaper articles to promoting the virtues of the town to tourists and potential residents. By the time Hot Springs received two rail lines in the summer of 1891, the town was experiencing a boom as its population rose from less than 100 people in 1886 to 1,227 residents at the end of 1890.⁷

Visitors to Hot Springs did more than simply “take the waters.” Following the “discovery” of Wind Cave by Jesse and Tom Bingham in 1881, the cave began to attract visitors as well. In 1890 Jesse McDonald began actively promoting the cave as a tourist attraction through newspaper articles and national exhibitions. Jesse McDonald, John Stabler, John’s son Charles Stabler, George H. Bronty, and M. V. S. Osmer, formed the Wonderful Wind Cave Improvement Company in 1892. The company constructed a 22' x 32' frame hotel and post office near the cave entrance, improved cave passages, offered tours for 50 cents, and sold photographs and cave specimens to tourists. In a 1901 guidebook, Dr. E. C. Horn mentioned that routes through caverns known as the Garden of Eden, Fair Grounds, and Pearly Gates had been “opened up to tourists at enormous expense.” According to Horn’s description, the health benefits of visiting the cave with its “excess of oxygen” ensured that tourists were “invigorated by visiting the Cave and reveling in its mazes and marvels.”⁸ The ascription of health benefits helped strengthen the links between the local hot springs and the Wind Cave site.

Tourism at the cave continued through a series of land disputes over original mineral claims held by John C. Moss and family and a feud between former partners Stabler and McDonald that ultimately resulted in McDonald’s expulsion from the property in 1898. That year Wind Cave became the property of the Black Hills Wind Cave Company of Custer County, incorporated by John Stabler and Friends.⁹

Hot Springs newspaper articles of the late 1880s, as well as contemporary promotional literature and personal testimony, promoted Wind Cave as an indescribable wonder that visitors had to see to believe.¹⁰ Like the more easily accessible Mammoth Cave in Kentucky, Wind Cave appealed to nineteenth-century tourists’ fascination with sites that, in the words of historian John Sears, offered a range of attractions that included “the

⁷ Badger Clark, “Hot Springs History,” *The Black Hills Engineer* XVI, no. 1 (January 1928): 8-12.

⁸ E.C. Horn, *Mazes and Marvels of Wind Cave*, 1901, 6-7.

⁹ John Bohi, “Seventy-five Years at Wind Cave: A History of the National Park,” 1962, 369, 400; Torma, 3-4.

¹⁰ Long, 18.

sacred and the profane, the mythic and the trivial, the solemn and the irreverent.”¹¹ As was the case with many tourist sites of the time, the journey to Wind Cave was presented as a pilgrimage into a world of subterranean marvels. An account of an early Wind Cave visit described the trip as a near-religious experience: “I donned some ragged and dirty clothing, in place of my ordinary suit, and ...with a candle in my hand, like one doing penance, I was ready to go down into this yawning grave and explore this new world ‘Inferno.’”¹² At the same time, the development of Wind Cave was an unabashedly commercial enterprise. Early explorers like Alvin McDonald sacked the cave for profit and worked hard to increase tourist numbers and profit. Whether cave visits centered on the profound or the profitable, tourist development at Wind Cave created a demand for roads that could efficiently and safely bring health and pleasure-seeking visitors from Hot Springs and other neighboring towns to the attraction.

Early Development of Wind Cave National Park

Attracted by the Wind Cave ownership controversy, U.S. public officials sent representatives of the United States Geological Survey to examine the cave in 1898. Their report emphasized the potential for tourism to the site rather than the material value of the contents of the cave. On December 26, 1899, the Commissioner of the General Land Office recommended to the Secretary of the Interior that lands in Wind Cave be withdrawn from settlement. The decision to reserve Wind Cave and the land above it as a public resort invalidated the McDonald Homestead claim, along with any mineral claims in the cave. The Department of the Interior was clearly considering the potential of creating a national park at the site. In a letter to the Commissioner of the General Land Office from January 6, 1900, Secretary of the Interior E. A. Hitchcock temporarily withdrew the land “pending final determination of the question of the advisability of recommending the setting of said lands apart as a National Park for the purpose of preserving the beauties of the natural curiosities of the Wind Cave”.¹³ Subsequent land withdrawals took place on July 12, 1901 and again on April 7, 1902. Additional recommendations by the Commissioner of the General Land Office made in May and June 1902 did not take effect until the establishment of Wind Cave National Park.¹⁴ In May 1902 signs were posted proclaiming that Wind Cave lands were “open to the public without any restrictions” apart from those outlawing private profit from tours and extracted treasures.

¹¹ John F. Sears, *Sacred Places: American Tourist Attractions in the Nineteenth Century* (New York: Oxford University Press, 1989), 29.

¹² James Morris, “The Wind Cave of South Dakota,” *The Great Divide* 7 (August 1892): 120.

¹³ E.A. Hitchcock to the Commissioner of the General Land Office, 6 September 1900. Transcript at the Wind Cave National Park Headquarters.

¹⁴ Bohi, 52.

The initial discussion of pending land disposition prompted Rep. Eben W. Martin and General Land Office Commissioner Binger Hermann to write to suggest that the Wind Cave area be added to the Black Hills National Forest. Instead, the Secretary of the Interior instructed Commissioner Hermann to establish Wind Cave National Park (accompanied by a report prepared by Special Agents of the General Land Office M. A. Meyendorff and Myron Willsie).¹⁵

The proposed Wind Cave National Park would be one of the smallest of the early national parks. A rough square about four miles on each side comprising approximately 16.5 square miles total, it cut a slim figure when compared to its mighty predecessors such as Yellowstone and Yosemite. Wind Cave boasted a subtle landscape and subterranean wonders instead of the obvious monumentality of parks like Yosemite and Yellowstone. While there was some skepticism about granting the cave National Park status, local boosters eagerly sought the distinction. Rep. Eben W. Martin of the Black Hills rallied the support of interested Hot Spring citizens and pushed the bill that would make Wind Cave a national park. John F. Lacey, presenting the Wind Cave bill to the House of Representatives, argued that the cave, however dry and inactive, represented the same kind of geological splendor found at Old Faithful.

Commissioner Hermann labored hard to justify the creation of Wind Cave National Park. He drew heavily from the reports of his surveyor to argue that, for visitors already familiar with Yellowstone and its geysers, the "subterranean wonders" of Wind Cave would provide a different sort of attraction, which he characterized as "superior, in point of attractiveness to Mammoth Cave."¹⁶ Park supporters extolled the cave's attractions and asserted that its subterranean wonders brooked comparison with the more conventional monumentality of Yosemite or the Grand Canyon. Congress passed a bill granting Wind Cave National Park status in December 1912, and the measure received final approval by President Theodore Roosevelt on January 9, 1903. Despite its official designation, neither Wind Cave nor the two other small parks created shortly thereafter (Sullys Hill and Platt) received anywhere near the funding or attention lavished on the major national parks such as Yellowstone and Yosemite.¹⁷

Early tourist accommodations in the park were meager. Describing the conditions he confronted as Wind Cave National Park's first superintendent in 1903, William Rankin wrote:

¹⁵ Bohi, 53-54.

¹⁶ Congress, Senate, *Wind Cave National Park*, 57th Cong., 1st sess., 17 June 1902, S. Rept. 1944 to accompany S. 1638, 2-3.

¹⁷ Alfred Runte, *National Parks: The American Experience* (Lincoln: University of Nebraska Press, 1997), 214-217.

WIND CAVE ROADS AND BRIDGES

HAER No. SD-55

(Page 13)

Cattle are allowed to roam at will around the place as there is no fence to keep them away. The roads through the Park are in bad condition in a great many places being washed out and very rough. The bridges, which are four in number, are all unsafe to drive over, one being broken so teams have to go around a considerable distance.¹⁸

Compared to the large, better funded operations at the major national parks, the visitors' experience at Wind Cave National Park was primitive. Tourists raised eyebrows at the defunct hotel that served as a visitor shelter, out of which Mrs. Rankin served meals. A fee of 50 cents could be paid for freelance cave tours provided by guides whose numbers dwindled as they failed to make decent profits.¹⁹ In May 1902, rules and regulations were posted on cloth markers around the park, a precursor of the regulatory and interpretive efforts that would become standardized in future years.²⁰ By 1908 the park was issuing first time transportation permits and efforts were made to widen the roads to handle the increased travel to the park by allowing two teams to meet and pass without being forced to leave the graded surface. The first automobile began to run regularly between Hot Springs and Wind Cave in 1909 and visitors began journeying to the park in greater numbers. Of the ten transportation permits issued to cave visitors, half were for cars and half for wagons.

Despite a slow but steady increase in tourism and modest attempts to improve park facilities, Superintendent Joseph Pilcher failed to win the appropriations he requested in 1910 for a number of further improvements, including a cave lighting system and an increase in the superintendent's salary. He resigned immediately. The growth of the park was further thwarted by the lingering sentiment that Wind Cave, Sullys Hill, and Platt National Parks had been passed for political reasons rather than on their own merits as bona fide national parks. In his *Annual Report of the Secretary of the Interior* for the fiscal year 1910, Secretary of the Interior Richard Ballinger wrote:

Of the national parks that have been created by congressional action, the following are entitled to rank as worthy of being called national institutions: The Yellowstone, the Yosemite, the Sequoia, the General Grant, the Mount Rainier, the Crater Lake, the Glacier, the Mesa Verde, and there should be added the Grand Canyon.

Ballinger explicitly challenged Wind Cave's right to remain in such hallowed company, lumping it along with Sullys Hill and Platt as "local parks having no sufficient national characteristics to warrant their development as such." Elaborating on Wind Cave's

¹⁸ William A. Rankin, *Superintendent's Annual Report*, 1903

¹⁹ Bohi, 54-56.

²⁰ Bohi, 415.

failings, he continued, "Owing to its inaccessibility and the fact that its scenic attractiveness is not sufficient, in all probability, to inspire a greater number of visitors to the park, it should be classed as a local or state park and can never in any sense of the word become a national park."²¹

In this hostile climate, Wind Cave superintendents had difficulty attracting funding and attention away from the large parks and other competing Department of the Interior projects. Superintendents, the only paid employees at Wind Cave in its early years until a ranger position was added in 1919, directed park maintenance under bare bones conditions. A significant increase in funds was made available to the park in 1912 through the National Game Preserve Act. The act created the Wind Cave National Game Preserve. The preserve was largely created from existing Wind Cave National Park lands and was intended to provide a protected habitat for bison, which the federal government and various other interests were trying to rescue from the brink of extinction. The act provided \$26,000 in management funds, which were to be administered by the United States Department of Agriculture's Bureau of Biological Survey. The initial bison herd was donated by the American Bison Society and shipped from the New York Biological Society to Wind Cave in November 1913. While the newly arrived game was well provided for, human accommodations remained poor. With the arrival of the game herds, Wind Cave National Park took on the dual function it continues to provide today. On the surface, herds of bison, elk, deer, antelope, and prairie dogs provide a glimpse of the conditions that prevailed on the Great Plains prior to European settlement, while below ground, cave tours attract visitors in search of subterranean wonders.

Early Development of Park Roads: The Difficult Years

The introduction of game animals to Wind Cave boosted tourism and increased the need for well-built park roads. It took almost a quarter of a century, however, for the entreaties of the Wind Cave superintendents to be rewarded through adequate federal funding. During the difficult early years of Wind Cave road development, park superintendents struggled to bring roads in line with the road standards that existed across the park boundaries.

The most common refrain of the early superintendent's reports was the need for better engineering to create permanent roads in place of the primitive tracks that connected the park's attractions. In the 1909 annual report, Superintendent Joseph Pilcher provided a sense of the primitive character of the park road system and underscored its susceptibility to the forces of nature:

²¹ Richard Ballinger, Secretary of the Interior, *Annual Report of the Secretary of the Interior*, 1910, 54-56.

One abutment of the first bridge south of the cave washed out requiring a temporary road to be constructed around same. . . . the three bridges immediately south of the cave should have stone abutments, as the character of the gypsum soil is such that when wet or under heavy pressure it is difficult to hold in place, and necessitates constant surveillance and repair. Good building stone can be had in the park within one mile of the bridges.²²

In many respects, the park roads were not much worse than the surrounding state and country highways. The dirt roads from Hot Springs to Wind Cave included wooden bridges that themselves called for frequent repair and replacement.²³ With Wind Cave staff and resources strictly limited, the superintendent attended to park road repair aided by a simple King road drag that the park assembled according to Department of Agriculture bulletin guidelines. Superintendent Rufus Pilcher, son of Joseph Pilcher, considered this simple log grading implement to be a very efficient and economical piece of equipment that was particularly useful for smoothing roads after they were softened by a heavy rain.²⁴

Through 1910, park roads and bridges were repaired through minor maintenance projects. Signs were also installed at the intersection of park roads to guide visitors through the park. In 1911, the superintendent reported that the roads were in "fair" condition but noted that they required almost constant maintenance.²⁵ This work included repair to the first bridge south of the cave, the grading of roads, with special attention paid to Wind Cave Hill, and the construction of a new bridge and concomitant grading of the new bridge approaches.²⁶ In 1912, only one of the four bridges along the main park road required replacement. The King road drag remained in constant use.

Frederick Dilley took the helm as superintendent in 1913. In the following year the park received enough funding from Washington to spearhead a significant road improvement project. By the end of the 1914 construction season a total of 1.5 miles of road bed was wholly reconstructed on a 3 percent grade "with ample width for passing traffic" and three new bridges.²⁷ When this project was completed, the roads inside the park outclassed those outside the boundaries. An article in the *Hot Springs Weekly Star* reported on an outing in which an official party driving a Stewart Big Six Imperial automobile reviewed the repaired Wind Cave roads "in record breaking time due partly to the fact that roads were in excellent condition." The newspaper praised the condition

²² Joseph Pilcher, *Superintendent's Annual Report*, 1909.

²³ Joseph Pilcher, *Superintendent's Monthly Report*, June 1910.

²⁴ Rufus Pilcher, *Superintendent's Monthly Report*, 31 June 1910.

²⁵ Abram C. Boland, *Superintendent's Annual Report*, 1911.

²⁶ Abram C. Boland, *Superintendent's Annual Report*, 1911.

²⁷ Frederick Dilley, *Superintendent's Annual Report*, 1914.

of the new park road and declared that Superintendent Dilley had “accomplished wonders,” suggesting that county road builders would profit from viewing the work.²⁸

Dilley predicted that both the park roads and approach routes would soon require additional improvements given the park’s location on the primary route to the Black Hills and other tourist destinations in Wyoming. Dilley noted a significant increase in the number of automobiles passing through the park, many of which were laden with camping equipment and bound for Yellowstone and tourist attractions. The number of commercial automobiles licensed to carry tourist parties into the park also increased, though the total of eleven permits was merely a hint of things to come.²⁹ Dilley tallied 1914 vehicular traffic at 550 cars, fifty-four camping parties, and 484 horse-drawn vehicles. He hoped that these numbers would rally support from Washington for additional road improvements. Stopgap repairs, he insisted, were becoming inadequate: the Department of the Interior needed to make a significant investment in substantial improvements to upgrade the park road system to accommodate automobile traffic.³⁰ “Temporary road repairs,” Dilley observed, “are a waste of money—the rain just washed away all the good materials improvements would form better road beds.” Upgrading the park road system would require a substantial investment in machinery. At present, Dilley reported,

What we have now is but the primitive plow, with scraper and a small drag; one road grader, not so large but what one team can pull it and a wheel scraper are needed very much. When road work is undertaken, it must be done with sufficient force of men and teams and within a short period of time, to make it efficient and effective; at such a time it is impossible to go out and borrow machinery.³¹

Dilley pointed out that improved roads would appeal to visitors, giving them a favorable impression of the national parks in general and encouraging their support for the rapidly growing park network. A first-class road system would also contribute to the increasingly sophisticated effort to cater to motor tourists, who were clearly becoming an important constituency. “I believe in pleaseing [sic] the public,” Dilley observed, “especially that portion of the public that travel.”³²

In 1915, the new superintendent, Thomas Brazell, reported that improvement of public roads twenty miles to the north and south of the park had greatly increased auto travel in the park. As part of a perpetual catch up game played between park and public road

²⁸ *Hot Springs Weekly Star*, 3 July 1914.

²⁹ Dilley, *Superintendent’s Annual Report*, 1914.

³⁰ Dilley, *Superintendent’s Annual Report*, 1914.

³¹ Dilley, *Superintendent’s Annual Report*, 1914, 15.

³² Dilley, *Superintendent’s Annual Report*, 1914, 16-17.

maintenance crews, Brazell requested appropriations for further improvements to ensure that park roads met or exceeded the standards set by approach highways.³³ Brazell's proposals included macadamizing and widening park roads to a width of 12', reducing grades, and performing general road and bridge repair. Reports of continual maintenance work on the park's primitive soil, rock, and gravel roads and constant requests for more substantial road construction continued. In 1916, Brazell called for the rebuilding of the park's four wooden bridges with masonry arches, dirt and rock fills. Contending with water was also an important concern. A minor log and plank bridge was constructed across Wind Cave Creek near the park's north boundary, three rock culverts were built, and rock was hauled to "8 or 10" other locations in preparation for additional culvert construction.³⁴ Brazell sent his suggestions for road improvement directly to the General Superintendent of National Parks, Robert B. Marshall, and directed his funding requests to the Secretary of the Interior in Washington, D.C.³⁵

Brazell's tenacity paid off. In 1917 the park was able to launch a substantial improvement campaign in which park roads were "shaped smooth and cleared of loose rock, grades reduced in many places, and curves reduced or eliminated." These improvements were justified in part by an estimated 40 percent increase in traffic that was attributed to the park's position along the increasingly popular Denver-Deadwood highway. The following year, Brazell reported the park road to be in "first class condition," although somewhat rocky. Heavy rains continued to pose a threat to park roads necessitating expensive repairs. Storms washed out crossings and carried away gravel, exposing rocks that made travel difficult and sometimes impossible. Park maintenance crews had to spend considerable time hauling gravel to repair these washouts.³⁶ Brazell continued to maintain that a wholesale reconstruction of the park road system was necessary. Piecemeal repairs seemed futile, though efforts were made to ensure that the spot improvements were conducted as thoroughly as possible in order to contribute to the eventual establishment of a modern engineered road through the park.³⁷

Superintendent Roy Brazell, who succeeded his father in 1919, clearly saw the relationships between road improvement and public relations. He understood that appealing to motor tourists was essential to the park's future growth and success.

³³ Frederick Dilley, *Superintendent's Annual Report*, 1915.

³⁴ Thomas M. Brazell, *Superintendent's Annual Report*, 1916.

³⁵ Thomas M. Brazell, Wind Cave National Park, to R. B. Marshall, Washington, D.C., 8 May 1916, transcript in the hand of the Department of the Interior, Washington D.C. (hereafter cited as DOI, Washington, D.C.); Roy Brazell, Acting Supervisor, Wind Cave National Park, to the Secretary of the Interior, Washington, D.C., 28 September 1916, DOI, Washington, D.C.

³⁶ Thomas M. Brazell, *Superintendent's Annual Report*, 1918.

³⁷ Thomas M. Brazell, *Superintendent's Annual Report*, 1918.

Improving the roads at Wind Cave would also contribute to the newly created National Park Service's strategy of catering to motor tourists, both as a means of attracting more visitors and ensuring more broad-based political support. In his 1918 annual report, Brazell attributed the previous year's record-breaking attendance "to the publicity that has been, and is being given to the park and to the Black Hills." In the same report, Brazell campaigned for a "good system of publicity" to capitalize on the region's growing popularity. Brazell speculated that "with the proper exploitation the number of visitors should easily be doubled next season." Underscoring his determination to improve the visitor experience at Wind Cave, he observed: "the tourist is on vacation...let's help him have a good time."³⁸ Wind Cave's publicity efforts could be seen on popular cross-country highways where directional signs helped tourists find their way to the park. The park's location along a stretch of the popular "Denver to Deadwood Highway" put Wind Cave in a position to benefit from the influx of motorists to the scenic Black Hills area.³⁹

Since weather played such an important part in motor tourism, directly influencing whether or not travelers chose the automobile over the train, it was imperative that roads remained in good repair at all times. In 1920, unfavorable weather and road conditions caused a dip in park attendance. Mud and washed out roads forced many visitors to abandon their automobiles before they even reached the park, making the final leg of the trip by train, if at all.⁴⁰ When the weather did cooperate, the lack of funds could effectively wash away any progress made on park roads. Reporting on the poor condition of Wind Cave roads in 1920, Superintendent Brazell observed:

This is entirely due to lack of funds. We have done all we consistently could with our meager appropriations. For this same reason we have not attempted any construction work on our roads for the past two or three years and our maintenance has been hard fought....We are hampered by a lack of funds and must submit to some humiliating criticism.⁴¹

This criticism stemmed directly from the disparity between public and park roads in a region that was increasingly known for the quality of its scenic highways. Concern about park roads and visitor safety stemmed from the steady increase in auto visitors in the park and subsequent pressure to provide roads that would match up to regional and national standards.

Automobile Tourism in Wind Cave and the Black Hills

³⁸ Roy Brazell, *Superintendent's Annual Report*, 1919.

³⁹ Roy Brazell, *Superintendent's Annual Report*, 1919.

⁴⁰ Roy Brazell, *Superintendent's Annual Report*, 1920, 14.

⁴¹ Roy Brazell, *Superintendent's Annual Report*, 1920, 19.

Auto tourism at Wind Cave began cautiously in 1907 when the park issued T. A. Smith a seasonal permit to transport passengers from Hot Springs by car, with the understanding that his automobile service would not interfere with other conveyances in the park. Cars could whisk tourists from Hot Springs to Wind Cave in fifty minutes, less than half the time of a horse-drawn carriage.⁴² By 1914 all park-issued transportation permits were for cars. In 1923, 92 percent of park visitors arrived by private automobile. Many stayed overnight as car campers.

While cave visitation remained relatively constant, the number of auto tourists passing through Wind Cave National Park increased steadily. Roads opened America to an expanding demographic that moved off the beaten path of railroad travel to a less structured realm of spontaneous roadside picnics and autocamping.⁴³ The establishment of tourist highways like the "Denver to Deadwood Highway" and the "Black and Yellow Trail" that connected the Black Hills to Yellowstone helped to bring visitors en route to other destinations to Wind Cave.⁴⁴ The main road through Wind Cave formed part of a portion of the Denver to Deadwood Highway known as the "Triangle D" road.⁴⁵ South Dakota boosters like the Twin City-Aberdeen-Yellowstone Park Trail Association, formed in 1912, and the Lawrence County and Deadwood civic organizations' good roads projects sought to improve roads and increase tourism.⁴⁶

Wind Cave National Park staff attended to the needs of their motoring visitors, providing advice about road conditions, campsites, hotel accommodations, and garage facilities along with general information about Wind Cave and other parks in the region. Superintendent Roy Brazell described the park staff's role in 1920 as follows:

We help the tourist plan his itinerary so that he can get the best out of his trip and see all that is possible of this park and the Black Hills in a given length of time. In short, we assist the tourist all we consistently can and do everything possible to make him feel welcome and at home in his National Park.⁴⁷

⁴² Long, 38.

⁴³ Warren James Belasco, *Americans on the Road: From Autocamp to Motel, 1910-1945* (Cambridge: The MIT Press, 1981), 3.

⁴⁴ Long, 38.

⁴⁵ Roy Brazell, *Superintendent's Annual Report*, 1920, 17.

⁴⁶ Shebby Lee, "Traveling the Sunshine State: The Growth of Tourism in South Dakota, 1914-1939," *South Dakota History* 19 (Summer 1989): 205-208.

⁴⁷ Roy Brazell, *Superintendent's Annual Report*, 1920, 20.

In response to increased motor traffic, the main highway leading into the park was raised and widened. A dangerous bridge was also replaced with an earth fill and culvert.⁴⁸ The number of auto tourists at Wind Cave increased almost every year until the onset of the Great Depression (the only declines were noted in 1919, 1921, and 1927). This increase reflected a national movement spearheaded by the National Park Service urging the American public to hit the road and explore its vastly improved parks. On a regional level, it reflected the instant attention the Black Hills received in 1927 when President Calvin Coolidge and entourage established a "summer White House" in neighboring Custer State Park.⁴⁹ Although Coolidge never visited Wind Cave, park attendance soared 23.8 percent to 100,309 the following year.⁵⁰

The basic funds provided by the National Park Service were still not sufficient to ensure that one year of good roads would continue into the next. The disparity between park and surrounding roads continued to reflect poorly on the park. In his 1921 annual report, Superintendent Roy Brazell urged that the park roads be brought up to state road standards. "Because of lack of funds," he wrote, "the park roads do not compare favorably with others in this section of the country. In the localities surrounding the park vast sums of money have been expended on construction and improvement of the highways, and as a consequence they outclass, by far, our park roads." Continuing with his assessment of park road conditions, he observed:

For years our old bridges have been considered unsafe for travel and repeated efforts have been made to secure funds to replace them with new and attractive structures. We were unable to obtain the necessary appropriation, and because it was absolutely necessary to do something to make these crossings safe, all of our available funds have been expended in replacing the old wooden structures with galvanized iron culverts and big fills...every dollar available was put into this work and as a result the balance of our road has been neglected and is not up to the standard maintained by roads adjacent to the park, and this year we must apologize for their condition. Heretofore the park roads have set the standard.

Underscoring the need for significant improvements rather than scattered maintenance and repair activities, Brazell maintained:

A special road appropriation should be made for this park so that we could build some permanent, hard surfaced road with easy grades. Our park

⁴⁸ *Annual Report of the Superintendent of National Parks to the Secretary of the Interior*, fiscal year 1918, 965-968.

⁴⁹ Lee, 217.

⁵⁰ Long, 41.

roads should at least be as good as the State and County roads surrounding us. At present, because of lack of funds, they are much worse.⁵¹

The situation was made all the more embarrassing by the development, just next-door, of a system of high quality highways throughout the Black Hills by state and county officials intent on improving the region's appeal to motor tourists. Brazell noted that these roads, known collectively as the "Triangle D" route, afforded motorists "many spectacular and picturesque views" and included graceful curves, spectacular switchbacks, and impressive tunnels that made them appealing in their own right.⁵²

Tough Times and Tenacious Struggle

In 1921, Superintendent Roy Brazell launched an active campaign to rectify the Wind Cave road situation. The first order of business was to improve four stream crossings that posed threats to visitors. Since he was concerned that funding for the construction of substantial NPS-standard bridges would not be forthcoming any time soon, he proposed to build four rudimentary bridges, which he claimed "could be made reasonably permanent and very serviceable though ... not as neat and attractive as a carefully planned bridge." In November Brazell sent National Park Service Director Stephen Mather plans for a series of bridges that he contended could be executed within the limits of the \$7,500 annual Wind Cave appropriation.⁵³ Mather advised that the park install corrugated metal culverts instead and put the superintendent in correspondence with NPS Chief Civil Engineer George Goodwin to work out the necessary plans.⁵⁴ Acting NPS Director Arno Cammerer reiterated Mather's advice the following July, urging Brazell to use the allotted funds for simple culvert-and-fill improvements and postpone his ambitions for a major road-working campaign until more resources became available. Cammerer advised Brazell to seek assistance from state and local highway authorities, noting that other parks had turned to these sources to supplement meager federal funds. "This is done in every one of our parks to a greater or lesser extent," Cammerer pointed out. Cammerer noted that Montana officials had "loaned us a lot of road equipment such as tractors and the like for road improvement" and suggested that Brazell see whether the South Dakota State Highway Commission was inclined to be similarly helpful. He reminded Brazell that many public highway departments had recently reaped a windfall in war surplus construction equipment. Cammerer further suggested that Brazell try to

⁵¹ Roy Brazell, *Superintendent's Monthly Report*, 12 September 1921.

⁵² Roy Brazell, *Superintendent's Annual Report*, 1921.

⁵³ Roy Brazell, Wind Cave National Park, to the Director, National Park Service, Washington, D.C., 2 February 1921, transcript in the hand of the National Archives, Washington, D.C. (hereafter cited as National Archives, Washington, D.C.).

⁵⁴ Stephen Mather, National Park Service, to Roy Brazell, Wind Cave National Park, 22 March 1921, National Archives, Washington, D.C.

take advantage of the surfeit of tractors, graders, dump trucks and other machinery the federal government had distributed around the country after the conclusion of World War I. If local authorities were reluctant to lend their equipment for free, Cammerer suggested that the park consider offering to pay a modest amount to cover the wear and tear on the machinery.⁵⁵ Pointing out that the major park roads also functioned as county highways, Cammerer urged Brazell to communicate the expectation that “the county should do its share.” While Cammerer expressed confidence that local officials would be “very glad to cooperate to the fullest extent possible,” he sent a copy of his letter to South Dakota Sen. Peter Norbeck to help facilitate the desired cooperation between local, state and federal road-building efforts.⁵⁶

In 1922, Cammerer informed Brazell of the NPS’s plans for a system-wide road improvement program that was scheduled to unfold over a three to four year period. Submitted to Congress in 1922, the program would fund the construction of new roads, the re-constructing and widening of old ones, and general resurfacing where necessary. Superintendents across the country were asked to survey road conditions in and around their parks and assess their road development needs so that headquarters could produce one centralized proposal. Cammerer directed Brazell to submit detailed information “relative to construction work done by the state and county authorities during the past seven years on roads up to the park boundary, covering costs, mileage, character of construction, present condition of roads, and other pertinent facts.” Cammerer warned that because the county officially maintained the main park road, it was unlikely that the NPS’s road program would fund its reconstruction. Cammerer directed Brazell to send these assessments “as carefully and quickly as you can” to Field Assistant Horace Albright at Yellowstone Park, forwarding a copy to Chief Civil Engineer Goodwin.⁵⁷

While many national parks and monuments received substantial increases in their allotments for road development, Wind Cave’s road system remained low on the list of NPS priorities. Since county officials were ostensibly responsible for the main road’s upkeep, Cammerer argued that the NPS should only fund modest improvements at Wind Cave. Explaining this policy in a letter sent to Albright and Goodwin, Cammerer observed:

In Wind Cave National Park the one road through the park is a county road and in my opinion there will never be another road; we have been doing maintenance work on this road ourselves. Superintendent Brazell has been asked to submit a budget, however. While I know from personal

⁵⁵ Arno B. Cammerer, Washington, D.C., to Roy Brazell, Wind Cave National Park, 29 July 1921, National Archives, Washington, D.C.

⁵⁶ Cammerer to Roy Brazell, 29 July 1921.

⁵⁷ Arno Cammerer, Washington, D.C., to Roy Brazell, Wind Cave National Park, 4 May 1922, National Archives, Washington, D.C.

observations that the county has never spent much money outside the park and has not been interfering with the little work we have done on the road through the park, it may be better that a couple of thousand dollars can be included to make better grades or improve the road in some other way.⁵⁸

Brazell responded immediately to Cammerer's request for an inventory of park roads needs. In an effort to counter the central administration's skepticism, he accompanied his report with the insistence that "the most imperative need of the Wind Cave Park...is a good road and this necessity is emphasized now that the federal, state and county officials have constructed good roads all around ... roads that by comparison make our park road look like a great trail." Brazell noted that in 1921 the State of South Dakota had constructed thirty-six miles of graded road near the park at a cost of \$500,000. These roads were 18' to 20' wide with 4" and 6" thick gravel surfaces that were maintained in excellent condition. The Custer County roads were primarily graded dirt roads in good condition. They had been maintained by the County Highway Superintendent since 1920 and had received \$13,906.85 worth of repairs from 1920 to 1921 with more repairs slated in the upcoming years. In the same period, Fall River County expended \$100,000 on the construction of six miles of road adjacent to the park, two miles of which were gravel surfaced with the following four miles to follow. This was in addition to general road maintenance work on roads approaching the park.⁵⁹

Brazell noted that Wind Cave's roads were also outclassed by the roads in nearby Custer State Park. "The entire road in the State Park is in excellent condition," he reported, "and visitors make much of the contrast between roads in this, a long-established National Park and the recently created State Park." With Wind Cave surrounded by over 100 miles of "real, gravel-surfaced road" maintained by state, county, and local officials, Brazell observed "we must bear a lot of criticism by the tourists...until we bring the park road to a condition comparable with the roads leading to it."⁶⁰

Brazell estimated that it would take \$13,867 to improve Wind Cave's roads to the level of surrounding roadways.⁶¹ When the general road plan was submitted, however, Wind Cave was only allotted \$7,296 to be divided into three annual appropriations through

⁵⁸ Arno Cammerer, Washington, D.C., to Chief Civil Engineer Goodwin, Portland, OR, 27 May 1922, National Archives, Washington, D.C.

⁵⁹ Roy Brazell, Wind Cave National Park, to Arno Cammerer, Washington, D.C., 27 May 1922, National Archives, Washington, D.C.

⁶⁰ Roy Brazell to Cammerer, 27 May 1922.

⁶¹ Roy Brazell to Cammerer, 27 May 1922.

1924.⁶² Even this meager appropriation was rescinded when the general road plan failed to pass Congress in 1922 due to federal treasury belt tightening.⁶³

Brazell was disappointed by news of the curtailment of Wind Cave road projects for the 1924 fiscal year. He repeated his entreaties to the NPS director, emphasizing the need to construct roads that would reflect well on the Park Service by standing on an equal footing with the surrounding public highways and state park roads. Brazell pointed out that the number of motor tourists continued to rise and asserted that “the one question they invariably ask is ‘how are the roads?’” The answer to this question, he insisted, was an embarrassment to the National Park Service. “Everybody is interested in good roads,” Brazell maintained. “It can readily be seen that the National Park, (or any community) that does not have good roads is going to get, and is getting, a lot of unfavorable advertising. These park’s roads are not ‘good roads.’ In fact the county roads around us are built up in better [condition] than our park roads.”⁶⁴

Since Brazell had been depending on an allotment from the rejected general road program budget, he had no way to fund ordinary annual maintenance work on the park’s roads. Without sufficient money, he would be forced to channel maintenance funds meant for other areas of the park to keep the roads serviceable. A lack of road funding therefore threatened park development in more ways than one.⁶⁵ Although the annual budget had already been submitted and would be difficult to change, Brazell requested an increase in the “Repairs and Alterations” section of the general estimate for 1924. With the budgets stretched thin throughout the National Park System, however, his request was denied.⁶⁶

In June 1923, Brazell submitted the same funding requests based on the road he had made the previous year. He added that state and county officials had released \$40,000 for construction of the twenty miles of road from Custer to the park line and a section of the highway extending into the park. He reported that during the course of the year, Wind Cave National Park managed to keep its road in fair condition and had proceeded with some fill and culvert work. He noted, however, that “these fills [were] too narrow and not up to grade nor are they properly finished to withstand rainy weather

⁶² Arno Cammerer, Washington, D.C., to Roy Brazell, Wind Cave National Park, 23 September 1922, National Archives, Washington, D.C.

⁶³ Arno Cammerer, Washington, D.C., to Roy Brazell, Wind Cave National Park, 17 October 1922, National Archives, Washington, D.C.

⁶⁴ Roy Brazell, Wind Cave National Park, to B. L. Vipond, Washington, D.C., 23 October 1922, National Archives, Washington, D.C.

⁶⁵ Roy Brazell to Vipond, 23 October 1922.

⁶⁶ B. L. Vipond, Washington, D.C., to Roy Brazell, Wind Cave National Park, 28 October 1922, National Archives, Washington, D.C.

conditions.”⁶⁷ Brazell reported that park staff continued to receive disparaging comments about the narrow, rocky dirt road that confronted motorists when they left the high standard regional roads behind.⁶⁸

Relief finally came Wind Cave’s way in 1924. On March 18, 1924, Congress unanimously passed legislation (H.R. 3682) authorizing \$7.5 million for the construction, reconstruction, and improvement of National Park and Monuments roads and trails under the jurisdiction of the Department of the Interior.⁶⁹ The legislation subsequently met approval in the Senate and was interpreted by many as a vote of confidence by the government in general favor of the National Park System. Provisions of the bill entitled Wind Cave to \$19,840 for the improvement of the entire six-mile stretch of the main park road. Cammerer instructed Superintendent Brazell to carefully oversee all aspects of the road construction projects in order to ensure that the results reflected well on the Park Service and made a good impression on the traveling public and government officials.⁷⁰

The proposed improvement of the roads within Wind Cave had repercussions beyond the park borders. In January 1924, just after the approval of park funding, Rep. William Williamson of South Dakota wrote Cammerer to ask if NPS funds could be used in the repair and construction of the road from Hot Springs to Wind Cave.⁷¹ Cammerer answered that “the proposed bill authorizes only the improvement of park roads within the National Parks and does not contemplate improvement of any of the park approach roads.”⁷² Cammerer explained that other agencies such as the National Forest Service were reluctant to have the Park Service extend its influence into their domains. Despite the opposition, Cammerer reported that several western congressmen had introduced legislation that would fund the improvement of park approach roads.⁷³

In his 1924 annual report, Brazell reported that the National Park Service was rebuilding the entire park road “to conform with roads to the north and south of the reserve.” He predicted that the road would be “be finished and in fine condition for the season of 1926.”⁷⁴ In the first of the proposed three-year \$20,000 project, the Park Service

⁶⁷ Roy Brazell, *Superintendent’s Annual Report*, 1923.

⁶⁸ Roy Brazell, *Superintendent’s Annual Report*, 1924.

⁶⁹ Arno Cammerer, Washington, D.C., to Roy Brazell, Wind Cave National Park, 29 March 1924, National Archives, Washington, D.C.

⁷⁰ Cammerer to Roy Brazell, 29 March 1924.

⁷¹ William Williamson, Washington, D.C., to Arno Cammerer, Washington D.C., 11 January 1924, National Archives, Washington, D.C.

⁷² Arno Cammerer, Washington, D.C., to William Williamson, Washington, D.C., 12 January 1924, National Archives, Washington, D.C.

⁷³ Arno Cammerer, Washington, D.C., to M. E. Dittmar, Lassen Volcanic National Park, 14 January 1924, National Archives, Washington, D.C.

⁷⁴ Roy Brazell, *Superintendent’s Annual Report*, 1925.

budgeted \$2,000 for the northern section of park road and \$6,000 for the southern sections of the park road. Reconstruction on the two-mile section of the North Park Road consisted of widening about a mile and a third and fully surfacing the road. This work upgraded the road to what Brazell termed a "safe" condition. The even more dilapidated four-mile South Park Road required a complete reconstruction involving widening, straightening, and surfacing its entire length.⁷⁵ The second phase of work continued in 1925. By 1926 Brazell was able to report:

Nearly all of the six miles of park road were reconstructed under the General Road Budget this year. We now have a road on which all grades have been appreciably lessened, whose curves have their radii greatly lengthened, and which has been materially widened at all points, thus providing a safety factor in the heavy travel we are experiencing.⁷⁶

Tight road maintenance funding after the three-year NPS-wide development program and an increasing number of Wind Cave visitors arriving by automobile (92 percent of the total visitor account in 1923⁷⁷) continued to test the capabilities of the park road system.

An effort to further develop the Wind Cave's facilities followed the improvement of park roads. Park officials also made greater efforts to integrate Wind Cave into the broader regional tourism scene that continued to grow with the increase in automobile traffic and the development of improved roads and visitor facilities in nearby Custer State Park. In 1927, the year Calvin Coolidge took up summer residence in Custer State Park and trained the national gaze on the Black Hills, Superintendent Brazell issued the following statement:

A better type of tourist is coming to the Black Hills. He demands the best and is prepared to pay for it. He expects in a National Park not only the focus of scenic grandeur but also insists that the comforts of the city be at his disposal. In the later sense the Wind Cave National Park can not favorably impress that type of visitor. He is in the majority. To him we must cater.⁷⁸

Unlike Wind Cave, Custer State Park was developed primarily for recreation and overnight tourist accommodation. Despite the different audiences, state and federal officials worked to make the parks mutually accessible through a connected, up-to-date road system. In July 1928, Stephen Mather, Sen. Peter Norbeck, and E. P. Walker of the

⁷⁵ National Park Service, Department of the Interior, "Three Year Road Program for the National Parks and Monuments, Justification First Year's Program."

⁷⁶ Roy Brazell, *Superintendent's Annual Report*, 1926.

⁷⁷ Roy Brazell, *Superintendent's Annual Report*, 1923.

⁷⁸ Roy Brazell, *Superintendent's Annual Report*, 1927.

Bureau of Biological Survey, accompanied by State Highway Commission and Bureau of Public Roads officials, made a survey of the north fork of the Wind Cave road, which was due for \$54,000 worth of reconstruction and gravel surfacing work under the NPS Road and Trail appropriation.⁷⁹

That spring, construction crews widened roads, eliminated dangerous curves, and eased grades over hills. Despite this progress, a group of visiting officials including Mather, Norbeck, Sen. Gerald Nye, Director of the Sub-committee of the Senate Committee on Public Lands and Surveys, and other elected officials toured the roads and advised the park to hold off on further repairs pending the possibility of a hefty federal appropriation for major improvements at Wind Cave.⁸⁰ In early October, NPS Chief Landscape Architect Thomas C. Vint visited the park from the department headquarters in San Francisco to inspect proposed road and building plans. During his visit, Vint gleaned information on Wind Cave roads and facilities to draft a park development plan.⁸¹ Later in the month, NPS Chief Engineer Frank A. Kittredge conducted a general inspection of the park headquarters and reviewed plans for the proposed Wind Cave road reconstruction.

On October 1, 1928 bids were opened for the reconstruction and surfacing of Section A of the Wind Cave road under the direction of the Denver office of the Bureau of Public Roads (BPR). The T. J. Tobin Construction Company of Madison, South Dakota submitted the lowest bid of \$44,805.60. In the same month, Superintendent Anton J. Snyder, Brazell's successor, reported that the park was making progress on the gravel surfacing of Highway 85 from Hot Springs to the park, the reconstruction of Highway 85 from Wind Cave to Pringle, and the Norbeck Cut-Off, which was completed in 1929.⁸² This section of road was designed to connect the north end of Wind Cave with SH 81 through Custer State Park and crossed over a section of Beaver Creek that officially fell within the game preserve boundaries. There were apparently differing opinions on the best way to span the creek, as Snyder's report on the construction of the road and Beaver Creek Bridge mentioned "a controversy over a 125 feet steel open bridge has been threatening the early completion of the road."⁸³ While a steel bridge would have been cheaper and easier to construct, such utilitarian structures were generally considered incompatible with pristine park environments. The Beaver Creek Bridge was constructed as an open spandrel reinforced concrete span that was gracefully integrated into its surroundings. The bridge was a beautiful example of the engineer's art, but it served an emphatically practical purpose. As Snyder observed in his monthly report for January

⁷⁹ Anton J. Snyder, *Superintendent's Monthly Report*, 18 August 1928.

⁸⁰ Roy Brazell, *Superintendent's Monthly Report*, 14 March 1928; Snyder, *Superintendent's Monthly Report*, 18 August 1928.

⁸¹ Anton J. Snyder, *Superintendent's Monthly Report*, 12 October 1928.

⁸² Anton J. Snyder, *Superintendent's Monthly Report*, 10 November 1928.

⁸³ Anton J. Snyder, *Superintendent's Monthly Report*, 9 January 1929.

1929, "the improvement of these approach roads is going to be a big factor in bringing more visitors to the park."⁸⁴

Early in 1929, the T. J. Tobin Construction Company was awarded the contract for the reconstruction and graveling of the park road in hopes of an early June completion. The Western Bridge and Construction Company, with the help of state and federal aid, neared completion of rebuilt SH 85 from the northern park boundary to Pringle. The new construction significantly altered the course of the old road, opening up additional scenic vistas and shortening the distance from Pringle to Wind Cave by two miles.⁸⁵ Progress on the Mount Rushmore Memorial, which was being funded by Congress and private donations, promised to spur additional construction and ultimately contribute to expanding local tourism.

In February 1929, the Bureau of Public Roads' B. B. Houser made an inspection of the park road to secure data.⁸⁶ In March, the T. J. Tobin Construction Company moved its equipment into the park and established a construction camp to begin work in early April. In the same month, the State Highway Department awarded the contract for the Beaver Creek Bridge on the Norbeck Cut Off. The dam on Cold Springs Creek that would form the last link between the park road and the Norbeck Road was put up for bid on April 9 by the Bureau of Biological Survey.⁸⁷ Fall River County maintenance crews handled most of the park road repair work in April. Road upkeep relied heavily on the availability of county workers and equipment.

Early work by the T. J. Tobin Construction Company on the South Fork Highway began slowly due to inclement weather and a lack of equipment.⁸⁸ By May, Tobin was tending to all park road maintenance including reconstruction and gravel surfacing of the park road. At the same time, Tobin brought construction operations to about a quarter of a mile south of headquarters with the intention of completing the road from the south to the north of the park. South Dakota State Highway 85 was redesignated SH 83 at this time in order to eliminate confusion over the junction of Federal Highway 85 and State Highway 85 near Lead. The opening of the new stretch of SH 83 between the northern entrance of the park and Pringle shortened the distance between the two places from thirteen to nine miles.⁸⁹ Because the rocky soil of the unfinished roads meant there would be no smooth stretches during construction, the decision was made to eliminate work on the stretch of road that passed through the park headquarters. Tourist season rendered this work impracticable and the superintendent decided to hold off on further construction until

⁸⁴ Snyder, *Superintendent's Monthly Report*, 9 January 1929.

⁸⁵ *Superintendent's Monthly Narrative Report*, 4 February 1929.

⁸⁶ *Superintendent's Monthly Narrative Report*, 6 March 1929.

⁸⁷ *Superintendent's Monthly Narrative Report*, 5 April 1929.

⁸⁸ *Superintendent's Monthly Narrative Report*, 8 May 1929.

⁸⁹ *Superintendent's Monthly Narrative Report*, 10 June 1929.

WIND CAVE ROADS AND BRIDGES

HAER No. SD-55

(Page 29)

plans for other building and development in the area had been completely worked out. The old road received a temporary surfacing, and Tobin delayed construction on the headquarters road, stock piling the additional road materials for later use.

By the end of May, the south section of road was ready for surfacing. Both the contractor and the BPR engineer had considered using local gravel in surfacing the road but when sample tests proved unsatisfactory they decided instead to use crushed rock from the Minnekahta Lime Stone ledge about 1.2 miles to the right of station 135. Superintendent Snyder was clearly irritated by Tobin's inadequate preparations, noting: "It appears....due to the unavoidable delays and the contractor's erroneous impressions of the nature of the work, that the grading will not be completed before August 15 and the surfacing before November 1st."⁹⁰ In June 1929 the Northwest Engineering Company of Kedoka, South Dakota won the contract for the construction of the Beaver Creek Bridge. Snyder observed: "The completion of this bridge together with the probable connecting of the park road to the Norbeck road over the dam will mean that an important feeder to the park will be made available for public travel."⁹¹ On July 18, NPS Chief Landscape Architect Vint arrived to inspect the park and review construction.

An unintended consequence of the \$54,000 road appropriation was that the vastly improved roadway stood out in striking contrast to the park's outdated and inadequate visitor facilities. In his annual report to the Director of the National Park Service, Superintendent Snyder made a plea for additional funds. He argued that the growth of tourism in the Black Hills, the increasingly advanced system of regional roads, and the continued popularity of the cave threatened to overwhelm existing facilities and create serious embarrassments for both Wind Cave National Park and the broader National Park Service. He stated: "The years soon to come are going to find us connected to the more important arterial and transcontinental highways with a system of good hard surfaced roads, and travel is going to be heavier than ever." He warned:

The cave seems to be growing in popularity each season, and I can modestly say that it is visited by more tourists than any other single attraction in the Black Hills. There is going to come a time and not far distant, either, when our puny capacity to operate is going to fail, just as an engine shall under a load far too great for its power. Now is the time if ever to begin to make some improvements tomorrow may be too late. I must emphatically advise you that the situation is actually serious and unless our estimates are given more substantial recognition by the budget and by Congress I am afraid we are sunk.⁹²

⁹⁰ *Superintendent's Monthly Narrative Report*, 17 July 1929.

⁹¹ *Superintendent's Monthly Narrative Report*, 17 July 1929.

⁹² *Superintendent's Annual Report*, 1929.

Snyder assured his superiors that the National Park Service status of Wind Cave was justified but warned that if inadequately funded, the park could easily sully the reputation of its parent organization. "The small appropriation and the absence of practically every development to meet the need of this ever increasing attendance," he insisted, "are making it humanly impossible to maintain the dignity of the federal government."⁹³ Snyder's wish was granted the following year when the 1931 Interior Department appropriations sent \$54,900 to the park, with \$39,900 allotted for the construction of physical improvements such as water and sewer systems, electric lights for the cave, and a ranger's dormitory. Road improvements were scheduled to include the completion of the crushed rock surfacing of the park road and the oil processing of the entire new road from the south entrance to the Biological Survey Dam on the north boundary.⁹⁴ With these needs met, the park began to focus on the development of an administration area and camping facilities. Continued consultation with Vint and the landscape department helped to move the park toward a general development plan.

In 1931 the park's northern boundaries were expanded to take in 1,200 acres of the Beaver Creek Canyon and other lands formerly managed by the U.S. Biological Survey, bringing the park's total area up to 11,760 acres. Most of this addition was fenced and continued to function as a game preserve.⁹⁵ In October, the park acquired an additional 110 acres consisting of two springs and surrounding land.⁹⁶

Federal depression relief programs funded several road projects at Wind Cave National Park. In the late fall, local crews conducted banksloping work, cutting and rounding road shoulders, near the Cold Brook Dam and Beaver Creek Bridge.⁹⁷ This work effectively smoothed over "unsightly" deep cuts and rounded steep banks to a 2-to-1 grade.⁹⁸ The crews transferred earth from the rounding of road shoulders for repair of the cave entrance. Road work persisted into the winter despite sub zero temperatures: when the frozen ground prevented bank sloping, laborers peeled guard rail poles, a task that put food on the table for three men with families.⁹⁹ In the spring, a 170' section of guardrail was completed near the Beaver Creek Bridge. An additional 900' of log guardrail was installed along the high road above the dam and completed in May of 1932.¹⁰⁰ Further roadwork in 1931 included surfacing and oiling, excavating shoulders and widening of turns.

⁹³ *Superintendent's Annual Report*, 1929.

⁹⁴ Press Release from Wind Cave National Park, 16 May 1930.

⁹⁵ *Superintendent's Monthly Narrative Report*, 10 April 1931.

⁹⁶ *Superintendent's Monthly Narrative Report*, 7 November 1931

⁹⁷ *Superintendent's Monthly Narrative Report*, 7 December 1931 and 7 January 1931.

⁹⁸ *Superintendent's Monthly Narrative Report*, 9 July 1932.

⁹⁹ *Superintendent's Monthly Narrative Report*, 5 March 1932.

¹⁰⁰ *Superintendent's Monthly Narrative Report*, 7 June 1932

Oiling proceeded slowly. The BPR project, which included 2.2 miles of road north of the buffalo dam, met with difficulty because the portion of road that had been constructed by the South Dakota State Highway Commission was less thoroughly compacted and of a different material than the portion of park road the BPR had built itself. Additional funds for this portion of the road were secured by a transfer of funds from BPR Mesa-Verde project 1A-E. The BPR surfaced the park road with a priming coat, a first coat of "94" road oil, course screenings, and a finish coat.¹⁰¹ Late in October 1932, the Park Service asked the BPR to furnish estimates for oiling the Wind Cave North-South Highway. The Park Service rejected a high estimate based on a type of higher-grade construction used in Yellowstone and opted instead for a less costly oil treatment that would minimize dust and preserve the present surface.

The NPS let a contract for this treatment, known as "Surface Treated Fine Crushed Rock," to the Northwestern Engineering Company, the same company that had constructed bridges and roads north of the park. Road work involved smoothing and compacting the surface of crushed stone road, removing dust and loose fines, and applying a prime coat of road oil "50" at the rate of 1/4 of a gallon per square yard of surface. After the prime coat penetrated the surface for five days, workers applied road oil "94" at 2/10 of a gallon per square yard, then applied and rolled a layer of coarse screenings followed by a second coat of "94" and a last rolling of fine screenings. The oiling project was completed in mid October 1932, but post-construction maintenance continued through the following year under the supervision of the BPR. Employment on these projects was eagerly sought and the park superintendent and contractor attempted to offer work to the most needy applicants. Describing the road work's impact on the local community Superintendent Edward D. Freeland noted: "While unemployment is probably less acute here than it is in many other sections of the country, the anxiety with which men apply for even a few days work suggests that employment has been scarce."

As the park road-surfacing project drew to a close, the Emergency and Relief Act (ERA) of 1932 approved the construction of the Custer-Newcastle approach road, granting the project \$222,500. Administered by the BPR, the road followed an amendment inserted by Senator Norbeck that authorized federal funds for "any one section of such road of not less than eight miles, which cross wholly or to the extent of 90 percentum owned by the Government of the United States." This project promised to provide local laborers with ample work. Although the road would be constructed thirty miles away from Wind Cave, adherence to NPS landscaping practices was secured because the road lay well within Harney National Forest and the U.S. Forest Service employed similar standards on its recreational roadways. The Denver office of the BPR opened bids for the approach road section of the Custer-Newcastle approach road on November 9, 1932. Minneapolis-based S. J. Groves & Sons Company was awarded the \$175,594 contract.¹⁰²

¹⁰¹ *Superintendent's Monthly Narrative Report*, 4 October 1932.

¹⁰² *Superintendent's Monthly Narrative Report*, 6 December 1932.

Work on the road began November 28, 1932, and a complete and convenient camp was built to accommodate the workers. Room and board cost 75 cents a day. The project considerably relieved unemployment problems in Custer County but as the year progressed, acting superintendent Hugh Miller reported that increased unemployment in counties neighboring the park created additional demands that could not be reasonably accommodated by the Custer-Newcastle road project.¹⁰³ Nevertheless, the city and county officials regarded the park road projects as a welcome source of relief since their budgets for relief work had been exhausted.¹⁰⁴

Park visitation was severely hampered by the depressed economy. "The majority of people who are traveling are folks who have jobs," Superintendent Freeland reported. He observed that this meant there were "very few farmers and almost none from eastern South Dakota, where drought has killed the crops and grasshoppers are again as bad as last year." For once road conditions could not be blamed for Wind Cave's troubles. "It is quite apparent that as long as the farmer is unable to get ahead financially," Freeland predicted, "our travel will not come up to normal years."¹⁰⁵

Despite the dip in park visitation, road maintenance continued in 1933 and included road patching with armor coat, cleaning drains, and working on road shoulders. Maintenance activity was particularly needed after rains and snowy weather. In October 1933, the 8.5 mile stretch of the Custer Wind Cave approach road was completed with graveling and oiling to take place in the following year.¹⁰⁶ To celebrate the completion of the project, the Kiwanis and Commercial Clubs of Custer and Newcastle held a barbecue and weenie roast at the park where Wind Cave staff welcomed 1,600 visitors and directed traffic.¹⁰⁷ Freeland installed a counter on the cattle guard south of headquarters to keep tabs on the amount of through traffic. With the new roads in and around the park completed, more motorists came through the park than actually stopped and enjoyed its primary attraction. While the number of tourists to the cave waned as a result of the depressed economy, general travel on the park roads showed a sharp increase.¹⁰⁸

CCC Work at Wind Cave

While the ERA provided temporary relief and helped improve roads outside the park boundaries, the long-sought appropriations and labor necessary to upgrade Wind Cave's

¹⁰³ *Superintendent's Monthly Narrative Report*, 13 February 1933.

¹⁰⁴ *Superintendent's Monthly Narrative Report*, 5 April 1933.

¹⁰⁵ *Superintendent's Monthly Narrative Report*, 10 July 1933.

¹⁰⁶ *Superintendent's Monthly Narrative Report*, 7 June 1934.

¹⁰⁷ *Superintendent's Monthly Narrative Report*, 10 July 1934.

¹⁰⁸ *Superintendent's Monthly Narrative Report*, August 1933.

roads and facilities arrived through another national program aimed at relieving the devastating economic depression. The Civilian Conservation Corps (CCC) was initiated by President Franklin Roosevelt and passed by Congress on March 31, 1933. The goal of the program was to put men to work on conservation-related projects throughout the country. Congress renewed the program twice, first after its initial two years, and second on June 29, 1937 for three more years. The 1937 act formally stressed employment and training along with conservation. The CCC ended officially on June 30, 1942.

Many CCC projects were aimed at the development of roads and the control of erosion in order to conserve natural resources and promote outdoor recreation, which was seen as having a wide range of beneficial social and economic effects.¹⁰⁹ In the Black Hills, major CCC projects included the creation of lakes and swimming and boating facilities, the development of campgrounds, picnic areas, playgrounds, trails, campfire circles, landscaping, and the construction or improvement of roads to bring people to these amenities. Black Hills National Forest Supervisor Theodore Krueger proclaimed the CCC crews would benefit not just in monetary terms, but from the knowledge that they had improved their local environments and that their hard work had benefited their fellow citizens. "It will be a source of pleasure and gratification to these men who worked in the CCC camps of the Black Hills to vacation here with their families," he predicted. "They will be able to point out with pride the green slopes that once were brown, that they made green by planting. They will camp in the camp grounds they helped develop. They will cross bridges they constructed. They will note the fat trees that were so slender when they relieved them of their competitors in the thinning operation."¹¹⁰

As the CCC became an established presence in the Black Hills, temporary tent encampments gave way to more substantial camps. Camp Wind Cave or CCC NP-1 began on July 16, 1934, more than a year after the official establishment of the CCC and thirteen days after the park received emergency funds to aid in drought relief efforts. By mid-October, after two months of fieldwork and tent living, the roughly 200 CCC enrollees occupied a permanent encampment. The camp, transformed from a drought relief to a "regular" camp, reorganized repeatedly throughout its lifetime and served as base to numerous CCC projects including landscaping, removing old structures, constructing a parking lot at the visitors center, and installing a sprinkler system. The crews spent considerable time grading the banks along the North-South Highway (Highway 85E) to transform the steep and raw cuts left by road construction into smoothly rounded slopes. An NPS press release stated the goal of this procedure was to blend the highway into the surrounding landscape and "to make the road seem almost to

¹⁰⁹ Robert Fechner, "The Civilian Conservation Corps," *The Black Hills Engineer* (December 1937): 7.

¹¹⁰ Theodore Krueger, "The CCC in the Black Hills and Harney National Forests," *The Black Hills Engineer* (December 1937): 25.

have 'grown' in the rolling grasslands of the midsection of the park."¹¹¹ Flattening and rounding the steep slopes left over from road construction was also a practical conservation measure that reduced erosion and promoted the growth of native grasses. Following NPS policy, the CCC crews attempted to create a naturalistic landscape dominated by native plants arrayed in informal arrangements. Describing the landscaping work around the administration area, Superintendent Edward Freeland observed:

It was therefore proper to "landscape" this area, but not in the sense used to denote the planting of exotic trees, flowers or shrubs. Anything approaching the formal, city park effect had to be avoided; all plants must be native to this particular section and slope of the Black Hills and the result made as natural as possible. During this project, 3,000 trees and shrubs, both evergreen and deciduous, were transplanted.¹¹²

Other major projects that further "naturalized the park" included the renovation of park buildings to "conform to the general type of architecture in the area," the construction of a "naturalistic" cave entrance, and the removal of game fences that dated back to the U.S. Biological Survey administration of the game preserve.¹¹³ CCC crews removed the old fence and, with four carloads of cedar posts shipped from Glacier National Park in addition to local timber, built 18.6 miles of high woven wire game fence along the perimeter of the park. Moving the fence from the roadways to the park boundaries allowed park wildlife to roam freely and "naturally" over the 12,000 acres of parkland.¹¹⁴ A CCC side camp continued this kind of work at Jewel Cave.

The CCC work was intended to boost the local economy on both a short term and long term basis. A 1936 press release distributed by the Department of the Interior proclaimed:

The material benefit to residents of the Black Hills area resulting from the establishment of a CCC camp in Wind Cave National Park have long been evident to the many communities in this region, many thousands of dollars having been spent locally by the government for the purchase of supplies and materials used on construction of the camp and in carrying out the dozens of projects completed thus far. The many improvements

¹¹¹ United States Department of the Interior, National Park Service, Wind Cave National Park Press Release, 10 April 1936.

¹¹² E.D. Freeland, "Development of National Park Areas in the Black Hills by the CCC," *The Black Hills Engineer* (December 1937) 29.

¹¹³ Freeland, 26.

¹¹⁴ Freeland, 27-28.

completed to date cannot help but benefit this region indirectly as well, by attracting additional visitors.¹¹⁵

During ongoing inspections of various park construction projects throughout 1933, NPS landscape architect Howard W. Baker and a range of park officials drafted plans for CCC work at Wind Cave. These plans corresponded with the general guidelines issued by the National Park Service and the CCC circulated in manuals like *Park and Recreation Structures* published in 1935 and 1938. In his introduction to the 1938 edition, National Park Service Architect Albert H. Good pointed out that it was unreasonable to expect all parks to exhibit the superlative scenery of a Yellowstone or Yosemite. He asserted that good planning and design could make more modest landscapes equally appealing to visitors searching for outdoor recreation opportunities.¹¹⁶ The designers of the CCC work at Wind Cave took Goode's admonition to heart. The rustic stone buildings, guard walls, and reconstructed cave entrance exhibit the rustic charm and inspired use of native materials that characterized NPS construction during this period.

The first CCC project at Wind Cave began in November 1933 when the park was told it would host a seventy-eight man project that would consist of tree planting, roadside cleanup, bank sloping, and the improvement of trails within the cave. The camp was established in December 1934 with sixty men and one woman, most of whom came from Hot Springs with a portion from Custer county. The CCC performed roadwork for which the park had long lacked funding. This included bank sloping, roadside cleanup, and the cleaning of drainage ditches.¹¹⁷ The first stage of the CCC program in Wind Cave was discontinued on April 26, 1934, causing an increase in local requests for work. In July, the park received word of the allocation of a drought relief CCC camp for Wind Cave.

The major CCC project at this time was the construction of an elevator building at the cave. Road maintenance employed both CCC crews and contracted labor. At the same time that the CCC was reestablished in the park, the Inland Construction Co. spent the month of August resurfacing the 7.5 miles of park road, using a Woods Road Mixing Machine. This machine, which was pulled by a 75 Caterpillar, was designed to scoop up windrows of crushed rock, mix it with oil, and spread the combined mixture on the road at a rate of 1/4 miles per hour.¹¹⁸ The project was completed in October 1934.

Superintendent Freeland reported the CCC and other federal relief efforts had improved the condition of the park:

¹¹⁵ Wind Cave National Park Press Release, 10 April 1936.

¹¹⁶ Albert H. Good, *Park and Recreation Structures* (Washington, D.C.: United States Department of the Interior, 1938), 1-2.

¹¹⁷ *Superintendent's Monthly Narrative Report*, 5 January 1934.

¹¹⁸ *Superintendent's Monthly Narrative Report*, 5 September 1934.

For many years Wind Cave has been one might say, marking time, with very little improvements and only AM&P appropriations to go on. This past year will always be remembered as the one year in which we got nearly everything we wanted. An elevator for the cave, two new residences, garage and equipment shed, new power plant, administration and operators building and an ECW camp whose work has cleaned up a number of unsightly old road scars and old buildings that have been in existence since the creation of the Park, besides numerous other projects that are lasting and beneficial.¹¹⁹

CCC roadwork in April 1935 consisted mainly of bank sloping on the portion of state-constructed road that had been added to the park by the extension of park boundaries in 1931. CCC laborers also worked through 1936 on several sections of the state-constructed park roads, using material from a high, rocky bluff to fill in unsightly borrow pits. This work improved the road by improving visibility on blind curves and enhancing the appearance of the roadside.¹²⁰ CCC work also included obliteration of the old road.¹²¹ Summarizing the year's activities in his 1935 annual report Freeland stated:

ECW Camp D-NP-1 was established near park headquarters on July 16, and within two weeks the camp was fully manned and work started on approved projects. Major accomplishments of CCC enrollees consisted of the moving and remodeling of an old shingled residence, the planting of almost 5,000 trees and shrubs as part of a general landscaping of the headquarters area, the sloping of more than 35,000 square yards of road shoulders, the obliteration of several old roads and borrow pits, and the improvement of 1-1/2 miles of cave trails—including the replacing of old wooden stairs by concrete stairs with iron railings.¹²²

While the CCC improved the scenic appearance of the park's roadsides, the Bureau of Public Roads and various contractors tended to road surface repair. According to Freeland, the repeated resurfacings -- three within the span of just a few years -- were necessitated by the fact the BPR projects always seemed to start too late in the year, so that the cold weather made it impossible to do "a first-class job."¹²³

During 1935, the CCC also worked on parking area development at the visitor center. This project included the widening of the headquarters road.¹²⁴ Improving the visitor and

¹¹⁹ *Superintendent's Monthly Narrative Report*, 7 January 1934.

¹²⁰ *Superintendent's Monthly Narrative Report*, 5 April and 7 May 1935.

¹²¹ *Superintendent's Monthly Narrative Report*, 6 August 1935.

¹²² *Superintendent's Annual Report*, 1935.

¹²³ *Superintendent's Monthly Narrative Report*, 6 November 1935.

¹²⁴ *Superintendent's Monthly Narrative Report*, 7 September 1935.

administration area and enhancing its ability to accommodate automobile traffic had long been recognized as an overdue necessity. In mid-February 1935, the Henry Carlson Construction Company of Sioux Falls began work on the new park administration building, working steadily on the project until its completion in early July. Throughout the summer, the CCC developed the landscaping and parking facilities surrounding the new offices and commissary. The CCC also constructed paths and footbridges to the elevator building during the same period. Parking lot work included the filling and grading of the parking lot and sidewalk as well as the placement of stone curbing and walls.¹²⁵ Because of a shortage of camp enrollees during the summer, the parking lot project called for the full CCC force. The crew worked to widen the road at headquarters by filling 200 square yards of parking lot and installing 400' of stone curb along with 400' of crushed rock sidewalks.¹²⁶

In August, CCC workers installed more than 1,500 cubic yards of dirt and rock along the stretch of road leading to the new administration building and completed an additional 50 square yards of parking area north of the administration area.¹²⁷ The construction at headquarters and E.C.W. shoulder sloping and borrow pits projects were carefully coordinated. Workers removed earth from the administration area to fill in borrow pits along the North-South Highway. This kind of balanced landscaping effort formed a major part of CCC road and construction projects throughout the 1930s. Bank sloping projects at Jewel Cave made up another significant portion of the CCC crews' workload.

On October 27, Wind Cave hosted an open house for 1,400 visitors, including Senator Norbeck, Mount Rushmore sculptor Gutzon Borglum, Associated Women's Clubs of South Dakota President Quena Stuart, and assorted influential Black Hills businessmen. The visitors toasted the new facilities with complementary coffee and doughnuts to the music of the Hot Springs High School Band. The parking lot was officially completed two months later when CCC workers filled in the parking area north of the administration building with 300 cubic yards of dirt and rock.¹²⁸ With the major work of the administration construction project completed, ECW projects were cut back to minor routine maintenance work. Several camp enrollees who had arrived at Wind Cave relatively unskilled received jobs outside the park for which their work experience in the park prepared them.¹²⁹

The administration area would continue to develop throughout the 1930s in tandem with the growing skill level of the CCC workers. During the spring and summer of 1939, a crew of fledgling masons began the installation of stone guardrails around the

¹²⁵ *Superintendent's Monthly Narrative Report*, 6 August 1935.

¹²⁶ *Superintendent's Monthly Narrative Report*, 7 September 1935.

¹²⁷ *Superintendent's Monthly Narrative Report*, 7 October 1935.

¹²⁸ *Superintendent's Monthly Narrative Report*, 6 November and 6 January 1936.

¹²⁹ *Superintendent's Monthly Narrative Report*, 6 November 1936.

administration area. This work continued through 1940, when a greatly reduced CCC camp of thirty to fifty men quarried and hauled rock from Cascade, thirty-five miles southwest of the park, to complete the guard rail project.¹³⁰ Acting Superintendent Howard B. Strickland's account of this phase of the project underscored the emphasis placed on training the CCC enrollees, even though this training aspect of the program often conflicted with the practical goal of completing projects as expeditiously as possible:

No doubt the project could have been pushed to completion much sooner had it not been for the untiring effort of the supervisory personnel to train and teach the enrollees as the work progressed. As a result, skilled workmen have been developed in various trades of carpentry, plumbing, masonry, and electrical work. The stone work should have special mention, for under the direction of our stone mason foreman, a Scot who learned his trade in the old country, stone cutters have been trained who are able to take their places in industry alongside men of much greater experience.¹³¹

Freeland noted that the CCC crews were still generally more efficient than conventional public works laborers. As the CCC work shifted from road maintenance to the construction of new elevator building at the end of the decade, a team of twenty-five WPA workers was assigned to slope the banks along Gobblers Knob and crush rock for the paving of the administration parking areas. Unimpressed by this new group, Freeland reported "it is interesting to note that the same number of CCC boys accomplished more work in the same period of time than the WPA crew."¹³²

By the end of October 1939, the diminished band of CCC camp NP-1 enrollees left Camp Wind Cave for the newly established and Wind Cave-administered Badlands National Monument. At Badlands, these laborers performed the same kind of bank sloping projects they had conducted at Wind Cave. On February 19, 1940, a fifty-man side camp, CCC Camp SP-3, left Narrows in Custer State Park for Wind Cave to complete the unfinished work of quarrying rock and constructing the stone guard-rail around the administration building.¹³³ In 1941, CCC side camp SP-5 completed the stone guardrail around the administration building as well as the utility area service road and several other trail and cleanup projects.¹³⁴ Final CCC side camp tasks at Wind Cave included obliteration of the permanent CCC Camp Facilities. The termination of the CCC program prompted the wholesale liquidation of all camp assets.

¹³⁰ *Superintendent's Monthly Narrative Report*, 11 March 1940.

¹³¹ *Superintendent's Monthly Narrative Report*, 4 January 1939.

¹³² *Superintendent's Monthly Narrative Report*, 6 June 1938.

¹³³ *Superintendent's Annual Report*, 1940.

¹³⁴ *Superintendent's Annual Report*, 1941.

Approach Road Development

In February 1936, Wind Cave officials received word that a State road crew would improve the Hot Springs and Custer approach roads by widening, straightening, and oil matting the southern road and surfacing the north road.¹³⁵ The Inland Construction Company continued to develop the Custer-Newcastle road to Wind Cave under Bureau of Public Roads administration, grading, removing guard rails for realignment, repairing the sub-grade, and resurfacing and oiling the road in the spring and summer of 1936.¹³⁶ The contractor completed the oil coat of the road between Hot Springs and the park in November 1937 with oil mat to follow. The work improved a stretch of highway that had long been considered one of the worst in South Dakota.¹³⁷

The BPR administered ongoing maintenance of the North-South Highway. During fall 1937, significant repairs were necessary because of the deterioration of the oil mat, which made it necessary to tear up, remix, and relay the surface. Wind National Park Cave requested additional appropriations to continue maintenance for an additional year as well as for the surfacing of the parking areas at headquarters.¹³⁸ The park received \$10,000 from the BPR for post-construction maintenance of the North-South Highway.¹³⁹ In April, BPR crews performed major repair work on the North-South Highway. A combination of an unsuitable subgrade and a lack of proper drainage had again caused the mat to break up in several places.¹⁴⁰ In May, Wind Cave received word that the park would take over this maintenance work on July 1.¹⁴¹ The BPR transferred equipment to the park consisting of one Caterpillar Motor Patrol, one Dodge 1 1/2 ton dump truck, one 3,000-gallon oil storage tank, one three-stall garage building, and various tools.¹⁴² Motor equipment operator Raymond Waugh joined the Wind Cave staff at this time. Prior to rescinding control over the project, the BPR improved the surface of the administration parking area.

The road the BPR transferred to the park was in poor repair, and Wind Cave maintenance crews began patching work immediately in order to ensure that roads would be in good repair before the winter weather.¹⁴³ Road maintenance was ongoing. On May 6, 1940, the park hired four day laborers to assist Waugh with major road repair that included all

¹³⁵ *Superintendent's Monthly Narrative Report*, 4 March 1936.

¹³⁶ *Superintendent's Monthly Narrative Report*, 7 July and 8 March 1936.

¹³⁷ *Superintendent's Monthly Narrative Report*, 8 November 1937.

¹³⁸ *Superintendent's Monthly Narrative Report*, 3 September 1937.

¹³⁹ *Superintendent's Monthly Narrative Report*, 8 November 1937.

¹⁴⁰ *Superintendent's Monthly Narrative Report*, 6 May 1938.

¹⁴¹ *Superintendent's Monthly Narrative Report*, 6 June 1938.

¹⁴² *Superintendent's Monthly Narrative Report*, 9 July 1938.

¹⁴³ *Superintendent's Monthly Narrative Report*, 8 August 1938

general maintenance work from road clean-up to surface patching.¹⁴⁴ Taking a cue from the State Highway Commission practices, the crew used heavy course sand rather than stone chips for the June seal-coating of the bituminous surface park roads.¹⁴⁵ At this point, the superintendent voiced concern that further road development, including the straightening of curves, would lead to faster driving and increased danger to park wild life (an increase in dead birds stricken along the newly surfaced highway corroborated this point).¹⁴⁶ Roadwork in July moved to a problem stretch of highway north of the Norbeck Dam. For years, the pavement in this area had continually broken down and the narrow width of the paved surface jeopardized drivers. Road crews widened the road from 20' to 25' and replaced the existing roadway with a 4" gravel base overlaid with a 3" bituminous surface.¹⁴⁷ In the following month, the crew shifted its focus to patching the North-South Highway and improving the road leading from the headquarters area to the water reservoirs. This work included grading and culverts.¹⁴⁸ By September 28, when the major roadwork was deemed complete, all laborers were relieved of duty.

Post World War II Park Expansion

With the dissolution of the CCC and World War II in full swing, activities at Wind Cave slowed; however, the expansion of the park was immanent. Wind Cave gained a connection with the Custer Recreational Area toward the north and northeast in 1942 with the receipt of an allotment for the maintenance, operation and protection of the Custer Recreational Demonstration Area (Custer RDA).¹⁴⁹ Park boundaries shifted in 1943 with an exchange of land with the National Forest Service. At this time, Rep. Francis Case proposed the disposition of the major portion of the Custer RDA, prompting a thorough examination and report on the ecological parameters of the possible extension. Meanwhile, a team of Public Roads Administration officials, Wind Cave officials, and the NPS Regional Landscape Architect conducted a reconnaissance survey to determine the extent of surveys needed to prepare plans for the reconstruction and realignment of the highway in accordance with upcoming Project Construction Program R-1-3.¹⁵⁰ Plans from the Denver Regional Office arrived at the park in May, outlining a proposed realignment, tentative grades, contours, and possible alternate lines. Senior

¹⁴⁴ *Superintendent's Monthly Narrative Report*, 10 June 1940.

¹⁴⁵ *Superintendent's Monthly Narrative Report*, 8 July 1940.

¹⁴⁶ *Superintendent's Monthly Narrative Report*, 8 July 1940.

¹⁴⁷ *Superintendent's Monthly Narrative Report*, 6 August 1940.

¹⁴⁸ *Superintendent's Monthly Narrative Report*, 9 September 1940.

¹⁴⁹ *Superintendent's Annual Report*, 1942.

¹⁵⁰ On July 1, 1939, the BPR was transferred from the Department of Agriculture to the Federal Works Agency and renamed the Public Roads Administration. On August 1, 1949, the agency was transferred to the Department of Commerce and the earlier name was restored.

WIND CAVE ROADS AND BRIDGES

HAER No. SD-55

(Page 41)

Engineer Clyde T. Learned, who called the park in early June to discuss the plans, explained that a lack of funds prevented the inclusion of cross sections and road designs. Unfortunately, the absence of these specifications forestalled major roadwork.¹⁵¹

The future of Wind Cave National Park remained unclear at this juncture. Political and business leaders including Congressman Case, local Chambers of Commerce, and three other civic groups in Custer and Rapid City felt that the federal government should cede jurisdiction, allowing Wind Cave to become part of Custer State Park. Hot Springs residents, the Chamber of Commerce, and the Kiwanis Club rigorously opposed this measure. Participants at a meeting attended by the NPS, Forest Service, and South Dakota representatives managed to convince Congressman Case that Wind Cave should not be transformed into a state park-style recreational facility but remain relatively undeveloped as a "natural habitat of the plains animals." This argument was eventually employed to push for the expansion of the park, an effort that was supported by the Black Hills and Badlands Association.¹⁵² On August 9, 1946, President Truman signed Public Law No. 708, more than doubling the size of the park from 11,718.17 to 28,059 acres.¹⁵³ This law also provided for land exchanges between Harney National Forest, the State of South Dakota, and Wind Cave National Park. At this point, the South Dakota State Legislature authorized land exchanges and the transfer of ownership and jurisdiction over all highways and roads through the park. The process of transferring state to federal land did not move smoothly and failure to receive funds for boundary fencing left Wind Cave in a tight financial situation. Appropriations distributed in 1951 funded the completion of a new boundary fence in 1952.

The original North-South Highway required constant maintenance attention. Heavy rains, harsh weather, and increasing traffic accelerated breakup of the bituminous surface. In 1948, the superintendent reported that the Wind Cave highway "is the poorest stretch of highway on the U.S. 85A between Edgemont and Custer, South Dakota." Once again, the stark contrast between the substandard park road and newly surfaced highways to the north and south lead to unfavorable criticism. In 1952, road maintenance crews completed a surface seal coating of the North-South Highway and repaired the most egregiously deteriorated spots. Under contract with the South Dakota Highway Department, the main highway was also painted with a center stripe. The park acquired Highway 87 from the old north boundary as well as county routes 65 and 66 to the north and east of newly acquired park land.¹⁵⁴ In May 1952, the State of South Dakota issued the park a permit to open a gravel pit at the north entrance for securing aggregate for the

¹⁵¹ *Superintendent's Annual Report*, 1943.

¹⁵² *Superintendent's Annual Report*, 1947.

¹⁵³ *Superintendent's Annual Report*, 1943; Laurence C. Merriam, Regional Director, NPS, to Director, NPS, 31 December 1943. Wind Cave National Park, HF, 1936-41, Box 1, File 1.

¹⁵⁴ *Superintendent's Annual Report*, 1952.

state road surfacing project from the Blue Bell Lodge in Custer State Park to the new north boundary.¹⁵⁵ In the following month, 1,000 tons of crushed gravel were spread over three miles of SH 87. The park also had to devote maintenance and construction energy to Jewel Cave National Monument over which it held administrative duties. During the spring of the following year, road maintenance crews installed seventy-five guideposts on SH 87. In the same year, the park received and installed numerous signs produced at the Mt. Rushmore sign shop. Crews shifted signs and pylons to the new north boundary location.¹⁵⁶ In August 1953, road crews installed drainage culverts on SH 87.¹⁵⁷ In April of the following year, park road crews added about 350 tons of new surface material to SH 87 and graded the highway shoulders.

The North Entrance Road Project was administered by the BPR. Work began in 1955 and the project was completed in 1956. This project finally eliminated the last stretch of gravel road on the main route through Custer State Park and Wind Cave National Park. During summer 1954, BPR Engineers W. H. Curiven, Jim Anderson, and C. W. Hunt along with NPS personnel Robert Hall, Willard P. Lindeaur, and Resident Engineer Melvin A. Thuring made a joint inspection of SH 87 in preparation for the construction and surfacing project. In September, BPR engineers made a preliminary survey including bridge construction, drainage areas, and possible material sights of SH 87. In the same month, the park removed a cattle guard at the junction of SH 85A and 87 in order to make the park boundaries clearer to visitors and hunters. With the survey completed by late December and officials at the BPR office in Denver preparing plans and specifications for the highway reconstruction, BPR and NPS officials surveyed borrow pit sites for aggregate materials. Regional landscape architect Benson and park naturalist Upton selected parking area, guardrail, and turnout locations and forwarded their proposals to Denver and the Department of the Interior for inclusion in the plans. As the Denver office prepared specifications and plans for contract bids, a BPR crew headed by Project Engineer C. W. Hunt and Engineer Jim Anderson staked the construction site in advance of contractors. The Northwestern Engineering Company of Rapid City, joined by sub-contractors responsible for timber clearing and concrete culvert construction, won the contract with a low bid of \$258,956.50. The total BPR-projected cost for the project, \$300,000, included \$3,200 for directional and interpretive signage and \$32,000 for construction engineering supervision by the BPR and head engineer Norman Rutherford.

The project began with timber clearing and culvert construction. Then heavy equipment moved in for sub grading and realignment work and a crusher plant was installed in a borrow pit site. When this gravel pit was exhausted, BPR engineer William F. Fitzer stepped in to investigate a new materials site. Constructing a new road in Reaves Gulch

¹⁵⁵ *Superintendent's Monthly Narrative Report*, 12 June 1952.

¹⁵⁶ *Superintendent's Monthly Narrative Report*, 1 April 1953.

¹⁵⁷ *Superintendent's Monthly Narrative Report*, 2 September 1953.

involved heavy excavation and blasting work that continued throughout the fall of 1955. In April, the BPR offered additional funds to complete shoulder sloping and interpretive parking and stopping areas along the highway. Following the winter shutdown and a period of excessive spring rainfall, work on SH 87 recommenced in June with the on-site mixing of oil mix material and NC-3 road oil as well as work on Pigtail Bridge railing. In July, after almost a year of work, Ben Mortimore of the NPS Western Office of Design and Construction (WODC), Ken Brewer of the BPR, Superintendent Semingsen and representatives from the Northwestern Construction Company inspected and approved the completed highway.

The SH 87 project included the development of roadside exhibits and interpretive signage. When heavy construction work was shut down by winter conditions, Regional Chief of Interpretation Gregg, Assistant Chief of the NPS's Museum Branch Buffmire, Park Naturalist Bryant, and Superintendent Semingson scouted the new north entrance road to plan six interpretive signs that had been included in road appropriation. The construction of roadside interpretive exhibits began in 1955 with the construction of the Norbeck Prairie Dog town pullout and exhibit.¹⁵⁸ The site included a parking area and interpretive signage. Day laborers quarried and cut rock for the guardrail and curbs. They also lay down base course aggregates and oil mat surfacing, constructed walkways, and smoothed the road shoulders. In July 1955, the first month of the dog town exhibit's operation, 59,995 visitors took advantage of the new facility. A visiting official, noting the immediate migration of prairie dogs from the center to the periphery of the town asked whether the exhibit might have frightened the animals away. Following the success of this exhibit, the NPS constructed six additional interpretive facilities along the new stretch of SH 87 under the supervision of the Western Office of Design and Construction.¹⁵⁹ Signs were generally produced at the Mount Rushmore sign shop. The exhibits employed texts and diagrams on rustic timber signs to interpret the ecology of Wind Cave National Park and the broader Black Hills region. Exhibits included "What You See," an explanation of park geology positioned over Beaver Creek; "Drama of the Land," a sign showing reversion of old sub-marginal farms to native cover; "East Meets West," an interpretation of the overlapping range of trees and shrubs; "The Buffalo Gap," an interpretation of a pegatite dike overlooking the southern hills and the historically significant Gap; "Rankin Ridge," an explanation of the nearby fire lookout; and the Northern Entrance exhibit "From the Mountain to the Prairies" that identified wildlife and interpreted natural history values.¹⁶⁰ Similar small signs explaining prominent trees and shrubs were installed on the path from the visitor center to the cave in June of the same year.¹⁶¹ Park officials also planned and constructed a public spur road from SH 87 to a parking lot at the foot of Rankin Ridge, providing a parking lot and scenic walk to

¹⁵⁸ *Superintendent's Annual Report*, 1955.

¹⁵⁹ *Superintendent's Monthly Narrative Report*, January 1956.

¹⁶⁰ Master Plan Development Outline, November 1957, 28.

¹⁶¹ *Superintendent's Monthly Narrative Report*, June 1956.

the fire lookout where the NPS had just installed a pre-fabricated watchtower. The road and path was “highly recommended for providing what is considered a significant interpretive facility to the park.”¹⁶²

On September 22, the park held a ribbon-cutting ceremony at the Buffalo Gap interpretive roadside exhibit with distinguished guests NPS Director Conrad Wirth and Sen. Francis Case officially inaugurating the first all-weather link between Custer State Park and Wind Cave National Park. Before the ceremony, the official party took a guided tour of the new park road and made stops at each of the six new roadside exhibits along the six and a half miles of newly surfaced highway. Wielding a huge pair of scissors, Wirth and Case officially opened the new highway while former governor Leslie Jensen, Black Hills State Park Supervisor Grant Morse, Custer State Park Superintendent Les Prince, Badlands National Monument Superintendent John Rutter, Ted Smith of the BPR’s Denver office, a publicist from the South Dakota State Highway Department, representatives of the contractor Northwest Engineering, and a host of other interested parties in attendance.¹⁶³

Mission 66

The opening of Highway 87 and the rendezvous at Wind Cave between National Park Service Director Conrad Wirth and Superintendent Semingsen anticipated Mission 66, the emerging National Park Service campaign aimed at updating parks to accommodate a nation-wide boom in motor tourism. During the highway ceremony keynote address, Wirth briefly described his goals for this nationwide National Park construction and improvement project and praised Senator Case and Rep. E. Y. Berry for their assistance. Case had worked hard to secure funding and authorization for SH 87, and Berry had served as a member of the Department of the Interior’s insular affairs committee in the House that had endorsed the project. Citing an anticipated leap from 5 million to 80 million visitors to National Parks by 1966, Wirth asserted that the NPS had an obligation to preserve scenic locations for the enjoyment of visitors. The goals of the Mission 66 program, Wirth declared, “was to prepare our national parks and monuments for the full impact of travel by 1966.” Most importantly, from Wind Cave’s perspective, Wirth promised that the new Mission 66 program would be heavily geared toward improving park roads and visitor facilities. Wind Cave National Park, he announced, was slated to receive \$1.5 million over the course of the program. Wirth lauded the high level of cooperation between Custer State Park, the Forest Service, the Public Health Service, the Bureau of Public Roads, and the State Highway Department in the construction of the

¹⁶² *Superintendent’s Monthly Narrative Report*, March 1956.

¹⁶³ *Rapid City Daily Journal*, 24 September 1956; *The Hot Springs Star*, September 1956.

new highway. Praise went both ways as Senator Case called Wirth “the most effective National Park Service salesman before Congress [among] some great directors.”¹⁶⁴

Mission 66 Planning at Wind Cave

In the decade following World War II, the recovering economy and subsequent rise in tourism overwhelmed the carrying capacity of many national parks. Meager funding since the dissolution of the CCC had left parks with neglected visitor services, trails, campgrounds, and roads. The Federal Highway Act of 1954 offered some relief, but in 1956 the National Park Service proposed Mission 66, a multi-million dollar program that promised “to meet the needs of a much greater number of visitors and at the same time safeguard fully the wilderness, scenic, scientific and historic resources entrusted to the National Park Service.” According to NPS historian Linda McClelland, “the Mission 66 program was intended to improve and expand visitor services by funding greater staff, improving the interpretation program, constructing modern facilities, and upgrading existing roads, trails, campgrounds, and other facilities.” Stretched over a ten-year period, the program was meant to culminate in 1966 with the fiftieth anniversary of the founding of the park service.¹⁶⁵

National Park Service Director Conrad Wirth, a landscape architect who during the 1930s had directed various National Park Service programs undertaken by the CCC and had been appointed Director of the Park Service in 1951, first introduced his Mission 66 campaign at an American Pioneer Dinner sponsored by in the Secretary of the Interior, the National Park Service, and the American Automobile Association at the cafeteria of the Interior Department. As the event participants from senators to conservationists dined on elk and bison provided by the South Dakota state park system, Wirth outlined the aims of a planning strategy that critics contended reinterpreted the original 1916 National Park Service mandate to emphasize visitor services and accessibility over the preservation of natural and cultural resources.¹⁶⁶

The Act of Congress that established the National Park Service on August 25, 1916 included a paragraph on the administration and development of the Park Service penned by Frederick Law Olmstead, Jr., stating that “the service thus established shall promote and regulate the use of the Federal areas known as national park, monuments, reservations...which purpose is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such

¹⁶⁴ *The Hot Springs Star*, September 1956.

¹⁶⁵ Linda McClelland, *Building the National Parks: Historic Landscape Design and Construction* (Baltimore: Johns Hopkins, 1998), 462-463.

¹⁶⁶ Laura E. Soullière, *Historic Roads in the National Park System* (Denver: United States Department of the Interior, 1995), 77.

manner by such means as will leave them unimpaired for future generations.”¹⁶⁷ Director Wirth emphasized the second aspect of this statement in Mission 66 literature as follows:

In saying “conserve” the Act of 1916 recognized that the cultural and inspirational products of parks are supplied by the natural of historic scene undamaged, unmodified, and unimpaired. To change the character of a park area in any important way destroys a part of its ability to yield those benefits to the human mind and spirit. Protection, then, while an absolute requirement, is not an end in itself, but a means to an end—it is requisite to the kind and quality of enjoyment contemplated in the establishment and perpetuation of parks by the Nation. Thus, we complete our concept of park purpose: The primary justification for a National Park System lies in its capacity to provide enjoyment in its best sense, now and in the future.¹⁶⁸

Recognizing that rising per capita income, an increased number of cars, and lengthier vacations translated into increased park use, Wirth outlined a massive development plan that would widen roads, change traffic circulation, and construct additional parking space. Essential to the plan was the continuation of the NPS/BPR collaboration begun in the 1920s.

The \$1.5 million in Mission 66 funds slated for Wind Cave would help improve roads, upgrade visitor facilities, and enhance conservation and interpretation efforts. A 1956 report entitled “Mission 66 for Wind Cave National Park,” defined Mission 66 as a “forward-looking program for the National Park System intended to so develop and staff these priceless possessions of the American people as to permit their wisest possible use; maximum enjoyment for those who use them; and maximum protection of the scenic, scientific, wilderness, and historic resources that give them distinction.” The report went on to state:

Construction is an important element of the program. Modern roads, well planned trails, utilities, camp and picnic grounds, and many kinds of structures needed for public use or administration to meet the requirements of an expected 80 million visitors in 1966, are necessary; but

¹⁶⁷ National Park Service, “Mission 66 for the National Park System” (Washington, D.C.: National Park Service, 1956, mimeo), quoted in McClelland, *Building the National Parks*, 462.

¹⁶⁸ From Conrad Wirth, “The Basic Purpose of the National Park System,” in National Park Service, “Mission 66 for the National Park System,” iii-iv, quoted in McClelland, *Building the National Parks*, 463.

they are simply one means by which “enjoyment-without-impairment” is to be provided.¹⁶⁹

The main route to such “enjoyment-without-impairment” would come in the form of road and facility improvement. In a press release celebrating the forty-third anniversary of the NPS and bolstering the Mission 66 program, Superintendent Earl Semingsen extolled the vision of “a Park System so developed, managed, and used, that future generations will be able to enjoy the values of this, their American Heritage.”¹⁷⁰

Mission 66 Road Planning in Wind Cave

Mission 66 era master plans helped create an increasingly unified design character throughout the National Park System. As National Park Service Chief landscape architect Dudley Bayliss described the planning process:

Master plans prepared by the National Park Service guided all park development. The road system plan was a section of each master plan. Each master plan, including the road system portion, was developed with the expertise of a variety of disciplines such as landscape architects, engineers, biologists, and administrative representatives who took into account their respective disciplines in developing the plan. Master plans provided direction to park development that was relatively removed from the effect that changes in personnel might bring to the park.¹⁷¹

The previous Wind Cave master plan dated back to 1942 at the tail end of CCC era. It focused on road improvements around the administrative and utilities areas as well as a small spur campground. The Mission 66 master plan extended these planning efforts to the main park road and the continuation of interpretive development throughout the park following the construction of SH 87.

To move vehicles through the park smoothly and minimize tourist impact on surrounding ecology, Wind Cave needed to mediate between road-bound tourists and the natural sights beyond their concrete path. Roadside interpretation was an important part of this process. According to Superintendent Semingsen, before Mission 66 stepped in to reverse the fifteen-year lapse in park maintenance between WW II and the Korean War, “park lands were abused and enjoyment was impaired by the masses of people crowding

¹⁶⁹ National Park Service, United States Department of the Interior, “Mission 66 for Wind Cave National Park,” n.d.

¹⁷⁰ Wind Cave Press Release, 25 August 1959.

¹⁷¹ As quoted in Laura E. Soullière, *Historic Roads in the National Park System* (Denver: United States Department of the Interior, 1995).

to the same spot to see the same view at the same time.”¹⁷² To support Mission 66’s emphasis on education and visitor enjoyment, planners developed “more frequent roadside turnouts...to accommodate without hazard the visitors viewing wildlife from the road” as well as “additional self-interpretive roadside sign and wayside exhibits...to explain the natural features and wildlife that visitors view from Park roads.”¹⁷³ These exhibits favored the interpretive value rather than purely practical use of park roads.

In an addendum to the 1956 Mission 66 prospectus for Wind Cave, National Park Service Associate Director E.T. Scogen advised that, in accord with approvals granted in the Mission 66 office, “routes 1 [85A] and 2 [87] are to be the major roads and all other roads comprising the system are to be of a lower standard of construction.”¹⁷⁴ From 1957 through the 1960s, Wind Cave cooperated with the National Park Service regional and national offices in tandem with the Western Office of Design and Construction to refurbish the Wind Cave road system in accordance with Mission 66 objectives. Plans were drafted and redrafted in a general Master Plan Development Outline beginning in 1957 with an interpretive overview followed by a July 30, 1957 revised prospectus approved July 30, 1957 and entitled “Mission 66 for Wind Cave National Park.” The comprehensive “Master Plan for the Preservation and Use of Wind Cave National Park,” approved by the Park Superintendent and National Director in November 1961 and revised through 1965, included five chapters entitled “Objectives and Policies,” “Visitor Use Brief,” “Park Organization Brief,” “Park Operations Outline,” and “Design Analysis.” The heavily annotated copy of this document in the park’s office suggests that park personnel had many questions about its directives and that the design decisions continued to evolve throughout the planning process.

Visitor Center Bypass

The Wind Cave Mission 66 prospectus contended that “with the enlargement of the Park to include an extensive natural range for prairie wildlife and with the upsurge in travel in the late 1940’s and 1950’s.... road improvement and development in the Park is required to handle the greatly increased travel and to bypass through commercial traffic.” Until this point, all through traffic had driven past the visitor center and parking lot, which were located on Highway 85A, later renamed Highway 385. With increased traffic moving through the park, this arrangement was increasingly untenable, both for safety reasons and traffic flow concerns. The Wind Cave Master plan prepared by Landscape

¹⁷² Wind Cave Press Release, 25 August 1959.

¹⁷³ National Park Service, United States Department of the Interior, “Mission 66 for Wind Cave National Park,” 3.

¹⁷⁴ E.T. Scogen, Washington, D.C., to Regional Director, Region 2, 16 November 1956, Development Outline for Wind Cave National Park: Planning and Construction, Wind Cave National Park Library.

Architect Samuel Serrano in June 1961 proposed an eastern bypass to 385 to isolate park headquarters from direct park traffic. Additional plans shifted the original stretch of 385 east. These proposals were revised in 1962, 1964, and April 1965 and finally approved in late May 1965.

Parking

The 1961 Master Plan for Wind Cave advised that “the location of U.S. Highway 385 and other non-park roads within the park, the consequent truck and other non-park use of the roads and the promiscuous driving off the roads onto the prairie are considered adverse uses and it shall be the policy to work toward their elimination.” The plan called for the rerouting of Highway 385 around the park border. When it became apparent that this was not a feasible option, the park settled for a less costly alternative that involved constructing a short bypass so that through-traffic would not have to go through the visitor center parking area. This arrangement would vastly improve the circulation of through-traffic while providing a safer and more pleasant environment outside the visitor. The plan also proposed to expand the capacity of the parking area from approximately 100 vehicles to 150-175.¹⁷⁵

Roadside Exhibits

In addition to improving traffic circulation, the Mission 66 plan for Wind Cave called for additional self-interpretive roadside signs and wayside exhibits designed “to explain the natural features and wildlife that visitors view from park roads.” By this time it was clear that only a fraction of park visitors toured the cave, so the Park Service increased its efforts to showcase and interpret the natural features, flora, and fauna that motorists observed as they drove through the park. *The Hot Springs Star* reported that only about a third of the 63,637 visitors travelling through the park in July 1959 stopped to tour the cave.¹⁷⁶

Since most visitors spent time above ground observing wildlife before making their way to other destinations, the NPS increasingly geared its efforts toward making the windshield tourist’s view of Wind Cave more rewarding—and safer. A 1959 press release underscored the unexpected dangers motorists occasionally encountered along park roads. Admonishing reporters not to make light of the event or juice up the details “in order to make a good story,” Superintendent Semingsen described the following event:

¹⁷⁵ Master Plan Wind Cave National Park, Revised April 1965, 3.

¹⁷⁶ *The Hot Springs Star*, 27 August 1959.

In Wind Cave National Park today, a small foreign car was stepped on by a buffalo.

No one was hurt, but the car—a new Volkswagen driven by Alfred E. Schild of Lombard, Illinois—sustained damage to both back fenders and the trunk, and the rear window was knocked out...

Chief Ranger J. Estes Suter said, "Often, when the mating season approaches (in late July), the buffalo get 'edgy', and are unpredictable. When they're being chased, they won't stop at anything."¹⁷⁷

No amount of road planning could eradicate the possibility of unplanned auto-bison encounters, but such incidents brought to the fore the issue of the delicate balance between the prairie preserve and modern transportation.

Following the successful example set by the interpretive exhibits installed at the northern end of the park with the completion of SH 87, park officials began to propose similar arrangements for the south entrance. The 1957 Master Plan asserted that "well designed interpretive signs at appropriate spots on the park road system will greatly enrich visitor experience and serve to increase understanding of the park's significance and possibly thereby to help discourage vandalism."¹⁷⁸ With most visitors traveling north from Hot Springs on the way to the Black Hills and other destinations, and the cave itself still drawing a steady stream of visitors, the NPS recognized the importance of improving interpretation in the southwest corner of the park to inform visitors about the flora, fauna, and geologic features they encountered. "As visitors approach this focal point of the Park's significant underground resources," the Master Plan pointed out:

they drive along roads designed for maximum appreciation of the surface resources. Along these roads, they may observe segments of tolling uplands prairie and wooded hills in unspoiled or restored natural condition, and animals that are native to such an environment. They may see bison, antelope, prairie dog and other animals in their natural habitat and gain an impression of what this section of the West was like before man put the lands to other uses. Existing and proposed roadside parking areas will facilitate observation of the wildlife and photography.¹⁷⁹

Reflecting the natural resources bias of many western parks, the human history of the area received scant attention. Assistant Director Scogen made the park's position on this abundantly clear in an addendum to the Master Plan asserting: "The interpretive

¹⁷⁷ National Park Service, United States Department of the Interior, Wind Cave National Park Press release, 30 July 1959.

¹⁷⁸ Master Plan Development Outline, November 1957, 27.

¹⁷⁹ Master Plan for the Preservation and Use of Wind Cave National Park, Volume I, Chapter 2.

program should be confined to the geological story of the Cave and the wildlife in the Park. Accordingly, proposals for the inclusion of exhibits on the Indian Story and pioneer history should be deleted from the interpretive program.” The natural history orientation of the park’s interpretive efforts was further underscored in the 1961 Master Plan, which stated:

The Mission of the National Park Service at Wind Cave is to perpetuate and improve the opportunity and capacity of the Park to fulfill its Mission of translating the resources into human values in the most enjoyable, meaningful, effective, and natural manner possible.

The Service’s responsibility for preservation of the Park’s physical resource is directed into two major areas of effort—the ecologically important remnant of upland prairie and its wildlife population and the limestone cavern and its delicate geologic features.

Just as this Park has two major parts to its Mission and two different significant resources, so does it have two Interpretive Themes of primary importance. One major theme is the ecological story of the rolling, upland prairie with its natural vegetative cover and wildlife population, much as it existed when first seen by the pioneers in the westward expansion period of American history. The other major theme is the story of the geological events leading to the formation of the Black Hills in which the Park is located, and to the eating away of the limestone layer into caverns and passageways which go to make up the existing Wind Cave.¹⁸⁰

Proposed interpretive efforts included a double sign at Gobbler’s knob to explain Buffalo Gap’s human history and the significance of the upland prairie and forests; a Prairie View double sign similar to the Prairie Dog Town exhibit to interpret pronghorn antelope and buffalo, titled, inevitably “where the buffalo roam and the...antelope play”; a Wildlife Overlook sign for viewing buffalo; and a sign entitled “Red Valley” to interpret the geology of the black hills dome.¹⁸¹

Interpretive Patrol

Roadside interpretation was not limited to the construction of signs and parking areas. Ranger naturalists provided an essential part of the interpretive roadside experience by driving the park roads and stopping to talk to tourists. Law enforcement and ecology went hand in hand under this carefully prescribed series of roadside visitor relations. The

¹⁸⁰ Master Plan for the Preservation and Use of Wind Cave National Park, Volume I, Chapter 1, 1961, 3.

¹⁸¹ Master Plan Development Outline, November 1957, 28-29.

1957 Master Plan Development Outline described interpretive road patrol protocol as follows:

Interpretive patrol by seasonal ranger naturalists and park rangers along roads was successfully performed during the summer of 1957. These uniformed men serve several purposes on such an assignment: (1) interpretation of wildlife and natural features at roadside turnouts;(2) traffic patrol; and (3) information service and public contact with a uniformed employee. For many park visitors who do not care to visit the cave, this interpretive patrol service may be their only contact with a uniformed employee while in the park...

Viewing and photographing the wildlife is often the only activity engaged in by many park visitors. Answering their questions about the wildlife by the patrolling uniformed man will likely increase their enjoyment of their park experience. For traffic control it is often necessary to take care of tie-ups where wildlife is close to the road and to discourage the all-too-frequent indiscriminate driving across grassland off the park roads.¹⁸²

As the primary source of contact for many visitors, these roadside encounters with park rangers were considered an integral component of the Mission 66 program. Today, rangers continue this practice of "roaming" to move wildlife across roads, monitor activity, and offer interpretive services.

Campground Development

While day trips to Wind Cave were common during the early days of the park, the lack of camping facilities prompted motorists to seek overnight accommodation elsewhere in the Black Hills. The park made modest efforts to encourage overnight stays, but in a 1931 report, Superintendent Freeland wrote that an undeveloped area put aside as a campground attracted few visitors; "hence very few visitors remain in the park after making a cave trip."¹⁸³ The first permanent campground in the park, completed by the CCC in 1937 about 1,000' north of the headquarters area along low standard access road, featured seven parking spurs outlined with "native stones of large sizes...placed in natural groupings" as well as a communal picnic area. These minimal facilities were justified on the grounds that there were ample accommodations in neighboring towns like Custer and Hot Springs and that Wind Cave's proximity to Custer State Park "in which

¹⁸² Master Plan Development Outline, 1957.

¹⁸³ Edward D. Freeland, *Superintendent's Annual Report*, 1931.

many delightful camping and picnic spots have been developed” made the provision of extensive campgrounds unnecessary.¹⁸⁴

By the late 1950s, it was apparent that the increasing size and number of camping vehicles had rendered the 1930s campground obsolete. The park’s Mission 66 prospectus noted that the Wind Cave campground was routinely overcrowded and advised that “Improved and enlarged camping facilities are urgently needed for the visitors who expect to find adequate facilities of this kind in the National Park.”¹⁸⁵

While a new and enlarged campground was proposed, Wind Cave officials made it clear that they did not want to transform the park into a major camping destination. The new campground would contain approximately 100 campsites but the management plan insisted that the general policy should be to promote the park as “a day-use area without ‘trailer villages’ or any other form of overnight accommodation.”¹⁸⁶ The location was also changed to move the campground further away from the park’s main attractions. The original campground was converted into a picnic area, though park officials insisted that even this activity should be minimized to prevent crowding and excessive wear and tear on the area near the park headquarters.¹⁸⁷

As outlined in the Mission 66 master plan, the new Elk Mountain campground would be designed to accommodate various types of camping outfits:

Immediately beyond the parking area, Loop “A”, one way system, takes off through a tree opening and campsites are located. The main campground road continues westward skirting the edge of a wooded area and provides camping on both sides. Camping here and on Loops “A” and “B” would serve best the auto with tent type or pickup truck with campers. It appears that Loop “C” would best serve trailers since it is at the west end of the Main Road where they would be screened from views on the approach road and would be screened from views on the approach road and would be provided with a convenient turn around. Generally the

¹⁸⁴ United States Department of the Interior, *Master Plan: Wind Cave National Park, South Dakota*, 1940.

¹⁸⁵ United States Department of the Interior, *Mission 66 for Wind Cave National Park*, n.d., 2.

¹⁸⁶ Master Plan for the Preservation and Use of Wind Cave National Park, Volume 1 Chapter 1, 8.

¹⁸⁷ Master Plan Wind Cave National Park, South Dakota, Developed Area Narrative to Accompany Drawing No. NP-WC-3009-M Headquarters Area, 1965, 2.

roads are located at the edges of hillside woods and near runoff drainages, yet, with ample space to allow camping along most of its length.¹⁸⁸

Superintendent Lombard explained the layout of the new campground to the Hot Springs Lions Club on July 26, 1961.¹⁸⁹ WODC engineers Heubner, Serrano and Ketchum reviewed the plans on August 2 and 3. The Brady Engineering Company began a survey on August 14.¹⁹⁰ On April 24, 1962, a preliminary drawing of the campfire circle was approved as were preliminary drawings of campground signs. It was recommended that the color of these signs correspond with the overall Wind Cave signage, that supports for the signs be made of metal brackets and stabilized in concrete, and that flat rather than beveled tops support sign timbers.¹⁹¹ Plans for campground fencing and a camptender's residence were approved in early May.¹⁹² The complete plans and specifications for "Construction of Roads, Fencing and Utility systems, Elk Mountain Campground" and "Residence, Comfort Stations, Campfire Circle and Campground facilities, Elk Mountain Campground" arrived at the park in June 1962 and the two projects were opened for bid on July 10 and July 19, respectively. William Flyte of Hotsprings won the contract for the campground roads and utilities, while John W. Strahan Construction Company of Riverdale, Michigan won the campground facilities contract.¹⁹³ The on-site review party included Landscape Architects Murray George, John Ronscavage, WODC engineer Steve Hart, Wind Cave Superintendent Lombard, and Wind Cave Chief Ranger Robert J. Murphy.¹⁹⁴

Some local business interests viewed the campsite development as unwelcome competition. Mr. and Mrs. Robert Noeller of the Deadwood Fish 'n Fry complained:

This is a glaring example of how the federal government eliminates private enterprise and certainly the program should be renounced and abandoned. When the demand for more camping facilities justifies the need for more development of campgrounds, then we intend to meet the demand: just as other privately owned campground operators intend to expand and enlarge as the need arises.¹⁹⁵

¹⁸⁸ Master Plan for the Preservation and Use of Wind Cave National Park, Volume 1 Chapter 5, 1962, 2.

¹⁸⁹ *Superintendent's Monthly Narrative Report*, 8 August 1961

¹⁹⁰ *Superintendent's Monthly Narrative Report*, 8 September 1961

¹⁹¹ *Superintendent's Monthly Narrative Report*, 9 May 1962

¹⁹² *Superintendent's Monthly Narrative Report*, 11 June 1962.

¹⁹³ *Superintendent's Monthly Narrative Report*, 8 August 1962.

¹⁹⁴ *Superintendent's Monthly Narrative Report*, 10 July 1962.

¹⁹⁵ *Rapid City Daily Journal*, 30 July 1962.

The campground project began in August 1962 with the clearing and grubbing of the area. This was followed by the stripping and stockpiling of topsoil, the installation of one 24" and six 30" culverts, the preparation of sub-grade, and the further excavation. Workers completed the main road sub-grade preparation in September, stripped the loop roads and parking area, and completed the installation of culverts in both the main road and Loop "A". By November, workers had oiled and chipped all campground roads. By December, all posts, timber curbing, and sidewalk headers were installed and the reinforced concrete gutter, drop inlet, and topsoiling were complete. A stop order was issued for the roads contract on December 15, 1962. Work had resumed by April 15, 1963, including the obliteration of contractor access roads as well as timber curb staking on Loop "D". On May 10, 1963, final inspection and acceptance of the campsite road project was complete with the complete campground facilities finalized on May 20. Day laborers installed tables, fireplaces, and trashcans in the months that followed. The Elk Mountain Campground opened to the public on Saturday, June 22 equipped with 100 campsites, tables and fireplaces. On June 25 the campsite hosted 106 visitors. Routed entrance signs fabricated at the Rocky Mountain Sign Shop were installed the following May.¹⁹⁶

The Media and the Mission 66 Campaign

Mission 66 enthusiasts promoted the program through a media campaign that promised to further the swell of National Park visitation that had necessitated the program. Charismatic and media-savvy Wind Cave Superintendent and community leader Earl "Tiny" Semingsen fit the Mission 66 evangelical profile perfectly. Throughout the late 1950s and early 1960s, Wind Cave National Park released a flurry of press releases, most signed by Superintendent Semingson, that repeated increases in park attendance and summarized the work the park was accomplishing under the auspices of the Mission 66 project.

The park promoted non road-related Mission 66 projects like the renovation of the cave's elevator the spring of 1959 along the same lines. Local newspapers like *The Custer County Chronicle*, *The Rapid City Daily Journal*, and *The Hot Springs Star* frequently picked up the releases and turned them around for their Black Hills readership. One such article, entitled "Wind Cave Announced Plans for "Mission 66" Improvements" published by *The Custer County Chronicle* on May 1, 1958, was lifted in large part from the Mission 66 Master plan. The article outlined upcoming park improvements according to standard Mission 66 categories including "Roads and Trails System," "Buildings and Utilities," "Visitor Services," and "Staffing." The article was clearly intended to articulate the Mission 66 road objectives to a broad audience. Under "Roads and Trails System" the article stated:

¹⁹⁶ *Superintendent's Monthly Narrative Report*, September 1962-June 1964.

The Park Mission 66 program includes the modernization of the present major Park roads, six miles of which have been completed, but not to make them fast through-highways. More frequent roadside turnouts are contemplated to accommodate without hazard the visitors viewing wildlife from the roadside. Additional self-interpretive roadside signs and wayside exhibits are to be provided to explain the natural features and wildlife that visitors view from park roads. Secondary roads are to be improved with minor realignment changes where necessary to help provide (combined with the primary roads) a loop tour through the Park and connecting with State, County, and Custer State Park road systems. This will greatly increase the chances of the visitors to see Park wildlife, even though part of the loop system would be just outside of the park, thus making a better traffic circulation pattern.¹⁹⁷

Although this wildlife loop never became the popular alternative Semingson envisioned, public statements such as this sought to raise public awareness of Mission 66 and upcoming changes in the park and make sure that visitation and appropriations would rise proportionately.

Wind Cave officials also promoted Mission 66 objectives by directly addressing prominent civic groups. On January 16, 1956, Superintendent Semingsen, accompanied by park naturalist Bryant, presented Director Wirth's Mission 66 message to the Custer Rotary Club.¹⁹⁸ The club volunteered to draft a resolution of support of Wind Cave projects and the proposed improvements for Jewel Cave National Monument.¹⁹⁹

Local papers made note of the beneficial effects that Mission 66 would have on the economy of South Dakota. At a January 9, 1957 ceremony celebrating the fifty-fourth anniversary of Wind Cave, Superintendent Semingson announced that the NPS planned to spend \$3 million on improvements to Wind Cave. Not only would these contracts likely benefit local companies and laborers, but the resulting increase in visitors would be a boon to the Black Hills tourism industry. A letter approving a Wind Cave National Park prospectus signed by Mission 66 Chief W. G. Carnes passed \$2,946,800 to the park with \$1,762,100 earmarked for road and trail development.

Mission 66 Changes Under Way

In 1958, under the supervision of WODC Landscape Architect William Rosenberg, the park installed a coordinated system of signs near the south entrance including a new

¹⁹⁷ *Custer County Chronicle*, Thursday, 1 May 1958.

¹⁹⁸ *Rapid City Daily Journal*, January 1957.

¹⁹⁹ *Superintendent's Monthly Narrative Report*, February 1956.

entrance sign and interpretive plaques about bison and antelope.²⁰⁰ Major reconstruction of the main park roads awaited the completion and approval of the Mission 66 master plan. The ever-increasing traffic took its toll on Wind Caves' roads, causing park managers to express concerns about visitor safety and satisfaction that echoed the complaints of the prewar years. Once again, the park was forced to make do with unsightly and unsubstantial temporary repairs in lieu of a much-needed major reconstruction program. In August 1960 Superintendent Lombard observed that "Highway U.S. 385 through the park could aptly be named 'Many Patches Highway.'"²⁰¹

General surface patching on Highways 385 and 87 continued through the fall and winter. On October 23, BPR and WODC representatives joined park personnel for a reconnaissance of Highway 385 in preparation of a photogrammetric survey.²⁰² On November 16, 1961, W. F. Fitzer, Head of the BPR Materials Lab, and a crew of men began making test pits to select sites for obtaining road base material.²⁰³ On December 8, the BPR began work in the park correlating a ground survey to the photogrammetric survey made earlier in the year.²⁰⁴

Road conditions continued to deteriorate as the reconstruction plans underwent repeated reviews and refinements. In July 1966, Superintendent Lombard's reported that the main park road was a "patch on patch surface" that was "taking all our efforts to keep it in reasonable repair." Sounding a hopeful note, he predicted that the long-anticipated repairs would finally get underway the following spring.²⁰⁵ In the meantime, Flyte Rock Products replaced the seal coating of two miles of Highway 385. Despite the reduction of oil from .3 gallons to .26 gallons per square yard, and the increase of chips to 23 pounds per square yard extremely high temperatures caused the road coat to bleed considerably.²⁰⁶

On September 9, 1964, the park held a field inspection and planning meeting that included Regional Director Garrison and Representatives Baclawski and Ronscavage of the WODC, P. B. Bleakman of the Bureau of Public Roads, and Superintendent Lombard. The participants discussed the relocation of Highway 385 and various alternates including a preferred route known as "Alternate C." The group also reviewed drawings for the redevelopment of the parking and headquarters area and urged that Regional Director Garrison approve the changes. The next day, the group, joined by WODC Engineer Hal Look reviewed a sketch map prepared by Landscape Architect

²⁰⁰ *Rapid City Daily Journal*.

²⁰¹ *Superintendent's Narrative Monthly Report*, 7 June 1960.

²⁰² *Superintendent's Monthly Narrative Report*, 8 November 1961.

²⁰³ *Superintendent's Monthly Narrative Report*, 8 December 1961.

²⁰⁴ *Superintendent's Monthly Narrative Report*, 10 January 1962.

²⁰⁵ *Superintendent's Monthly Narrative Report*, 13 July 1964.

²⁰⁶ *Superintendent's Monthly Narrative Report*, 6 August 1964.

Ronscavage for the general development of the Master Plan. The following day the WODC Regional Director reviewed the drawing on site. The development plans called for a three-year combined effort at Wind Cave National Park and Jewel Cave National Monument. The construction program included tunnel access at Jewel Cave, roads, parking, visitor's center, elevators, one cave tour route, and employee housing and utilities systems.²⁰⁷

On February 21, 1966, the culminating year for Mission 66, Warren D. Hotchkiss, former superintendent of Theodore Roosevelt National Memorial Park in North Dakota, replaced Jess Lombard as Superintendent of Wind Cave. The excitement about Mission 66 had dwindled considerably since the promising early days when Superintendent Semingson promoted the project at every opportunity. The park press release announcing plans for a year-long fifty-year birthday celebration for the Park Service did not even mention the program. Plans for the Highway 385 bypass and headquarters development remained in the planning stage. The BPR opened bids for the 5.6-mile North-South Highway reconstruction project on April 27, 1966. Dean R. Rounds of the Roth Construction Company won the contract with the low bid of \$568,576.²⁰⁸ Superintendent Hotchkiss announced the commencement of the project at a Hot Springs Chamber of Commerce meeting in early May. *The Hot Springs Star* published construction plans including a map of the existing road, the small portion of the road to be eliminated near the failed Norbeck lake--affectionately referred to as "Peter's Puddle"--and the new road and parking areas. With annual visitation expected to reach the million-visitor mark, the park also announced plans to install two new high-speed elevators and to expand cave tour routes.²⁰⁹

Highway 385 Design and Relationship to National Park Service Standards

The construction of the visitor center bypass and additional roadside parking typified the Mission 66 effort to enhance a park's ability to accommodate motoring tourists. The 1967 reconstruction of Highway 385 and the concomitant construction of the visitor center bypass required grading and laying a new bituminous base course on 5.912 miles of road. The project involved the obliteration of old stretches of Highway 385, the construction of three new intersections, and the expansion of the visitor center parking area. One existing roadside exhibit was reconstructed on the new roadway and four additional interpretive areas were developed along with eleven pullouts for wildlife viewing. The reconstruction of the pre-existing Bison and Antelope exhibit, referenced as Parking Area "A" in construction drawings, included the construction and installation

²⁰⁷ *Superintendent's Monthly Narrative Report*, 12 October 1964.

²⁰⁸ National Park Service, United States Department of the Interior, Wind Cave National Park, 10 May 1966.

²⁰⁹ *The Hot Springs Star*, 12 May 1966.

of an 8'-wide bituminous walkway and tapered concrete curbs, construction of concrete curbs around the 16' long safety island between the parking area and main road, the placement of an 18" drainage culvert, and backfilling and sloping to blend the parking area with the original grade. The new parking area was designed to accommodate nineteen cars in both head-in and parallel configurations. While they differed slightly in scale and capacity, each of the new parking areas shared a similar plan and section, with a basically symmetrical parking area separated from the main roadway by a grassy safety island surrounded by a concrete curb. The size of the interpretive parking areas varied slightly. The interpretive exhibits overlooked the park and were accessed by a bituminous walkway. Parking Area "B" accommodated twenty cars and four trailers in both head-in and parallel positions and was located west of the roadway on the outside of a curve. A 106' grassed mound separated the parking area from the main road. Parking Area "C" had an eighteen-car, four-trailer capacity and a narrow 18'- long safety island. The pre-existing prairie dog town interpretive area at the intersection of Highways 87 and 385 with a twenty-five car, five-trailer capacity was resurfaced, and new access was established from the reconstructed highway.

The Highway 385 project involved widening the road at eleven points along the road to make room for parallel pull-outs. Workers determined the exact size and location of each pullout on site. Each of these pavement widenings followed the curve of the road to avoid the appearance on an unsightly bulge in the pavement and was bounded by a 6 1/2" bituminous curb that was backfilled and blended with the original grade, and swelled to 38'.

The first new intersection heading north on 385 provided access to two spurs leading to fire roads. A parallel pullout accommodating six cars was provided at this junction. The next intersection was the turnoff to the visitor center. The old roadway leading to the visitor center was accessed by a sharp left turn from the new bypass. An extra lane was added at this point to accommodate turning traffic. The new bypass continued in a northeasterly direction for approximately three-quarters of a mile and then veered back to the northwest. The old highway to the visitor center was realigned slightly to improve the approach. Portions of the old roadway were incorporated into the new visitor center parking area arrangement. Abandoned sections were obliterated and replanted to meld with the surrounding native vegetation. Another 90 degree intersection joined the old road and new bypass approximately half a mile north of the visitor center. The remodeled visitor center parking area was almost doubled in size, increasing the number of parking spaces to 171. Workers relocated the CCC-constructed stone guardrails. Using existing materials and matching stone and bituminous surfacing, they reconstructed and lengthened the stone curb and walkway on both sides of the visitor center. A 3'-wide colored-concrete island separated north- and south-bound traffic. Parking was provided on both sides. A break directly across from the visitor center entrance allowed traffic to turn around part way through the parking area. Originally,

head-in parking was planned for the eastern side of the parking area closest to the visitor center with parallel parking along the concrete median, but the opposite configuration was eventually adopted. The original stone curbs and bituminous walkway, flagpole, and welcome sign were all moved back to accommodate the parking area expansion. Other adjustments included the removal of trees, the installation of a retaining wall in front of the existing residences, and the construction of a stone curbed island to cap off the southern half of the parking area. The reconstruction plans were designed by Ronscavage and signed by Baclawski as well as acting chief of the WODC Smith and U.S. Public Health Superintendent Lambard.

On August 21, 1967, the fifty-first anniversary of the National Park Service, Superintendent Hotchkiss announced that the realignment of Highway 385 and the expansion of parking facilities at park headquarters were nearly complete. The announcement received scant publicity, however, as park road improvements were increasingly taking for granted by the traveling public and park officials alike. By the mid-1960s, moreover, there was significant opposition to road development projects in many of the more prominent parks, though Wind Cave construction did not appear to generate a noticeable anti-road development faction. Park officials continued to view road improvements as essential components of the broader mission of enhancing visitor's enjoyment and increasing their knowledge of Wind Cave's above- and below-ground natural resources. The reopening of Highway 385 went largely unremarked as park news releases focused on promoting new nature programs like the cave "Candlelight Tour," the "Subterranean Program," the "Spelunking Tour," and the surface "Morning Bird Walk," "Evening Wildlife Caravan," and a number of different hikes offered to the ever-increasing tourist population.²¹⁰

The waning enthusiasm for the Mission 66 agenda reflected a system-wide shift in emphasis as the NPS began to realize that visitor facilities could not be continually expanded without adverse effects on the natural resources the parks were originally intended to protect. NPS policies increasingly acknowledged the futility and potential negative impacts of trying to continually expand visitor facilities to keep up with the continued growth in motor tourism. Planning and policy statements emphasized that the *quality* of the park experience in terms of its ability to bring people and nature together far outweighed the importance of the *quantity* of people who experienced it. The automobile was increasingly presented as a detriment to the Park Service's goals rather than as the savior of the system, as it had been cast through the first fifty years of the Park Service's development. NPS Director George Harzog articulated this new outlook:

The automobile as a recreational experience is obsolete, we cannot accommodate automobiles in such numbers and still provide a quality environment for a recreational experience...No more roads will be built or

²¹⁰ Wind Cave National Park, Press Release, 18 December, 1967.

widened until alternatives are explored. We want to give a park experience not a parkway experience...The National Park Service must not be obligated to construct roads, or to manage traffic, in order that new kinds of mobile camping vehicles be accommodated. The development of parking areas for trailers at park entrances, and the exclusion of vehicles from park roads not capable of handling them, are the proper solution.²¹¹

In 1967 the NPS produced a series of guidelines for park road development that translated this agenda into planning policy and design standards. The 1967 *Park Road Standards* reiterated Harzog's assertion that new roads should be built only as a last resort and proposed a revised process for approval of road design and construction. By the time this document was introduced to the parks, the reconstruction of Highway 385 through Wind Cave was already well under way. Many of Wind Cave's Mission 66 era improvements could be seen as presaging the purportedly new policies. Highway 385 featured pullouts and interpretive exhibits that were intended to slow motor traffic and extricate motorists from the cars, however briefly. With the exception of the visitor center bypass, the reconstructive project included little new road. The decision to limit campground development presaged later NPS efforts to scale back such facilities. While it soon became popular to criticize the Mission 66 for fomenting unnecessary development, the Wind Cave road system's emphasis on employing park roadways to access and interpret natural features pointed the way to the future at the same time that it reflected a long-standing NPS tradition. The interpretive pullouts and the messages they were designed to convey were also ideally suited to the NPS's efforts to promote late-twentieth century ecological and environmental perspectives. Superintendent Lest McClanahan, a National Park Service veteran and trained botanist who replaced Superintendent Hotchkiss in July 1969, articulated this point of view in a press release that was picked up by the local papers. In January 1970 the *Rapid City Journal* and *The Hot Springs Star* announced that Wind Cave was prepared to "play an important role in fulfilling the new demands created by our nationwide concern over the quality of our environment" stating that:

People are awakening to the artificiality and degradation of much of our modern-day environments and are looking for areas such as Wind Cave National Park where they can rediscover our natural heritage and their place in the order of nature. Hopefully each of our visitors will take home an increased awareness of the importance of our physical environment and will be inspired to a sense of involvement and responsibility for maintaining quality environments everywhere.²¹²

²¹¹ As quoted in Soullière, 80.

²¹² National Park Service, United States Department of the Interior, Wind Cave National Park, Press Release, 7 January 1970.

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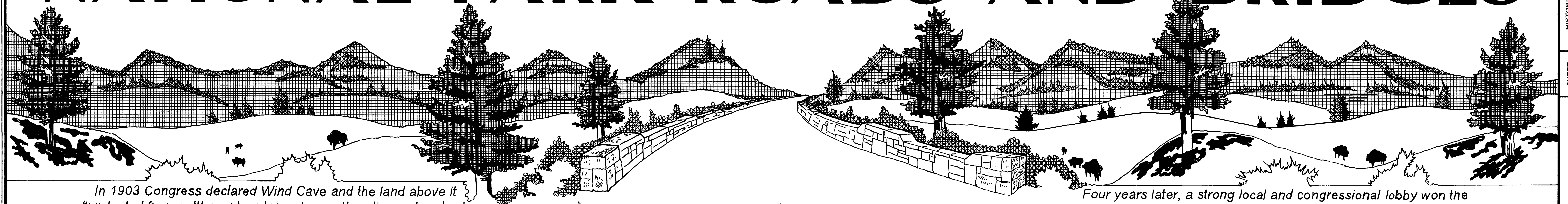
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Also used were *Superintendent's Annual Reports* and *Superintendent's Monthly Narrative Reports*.

WIND CAVE NATIONAL PARK ROADS AND BRIDGES



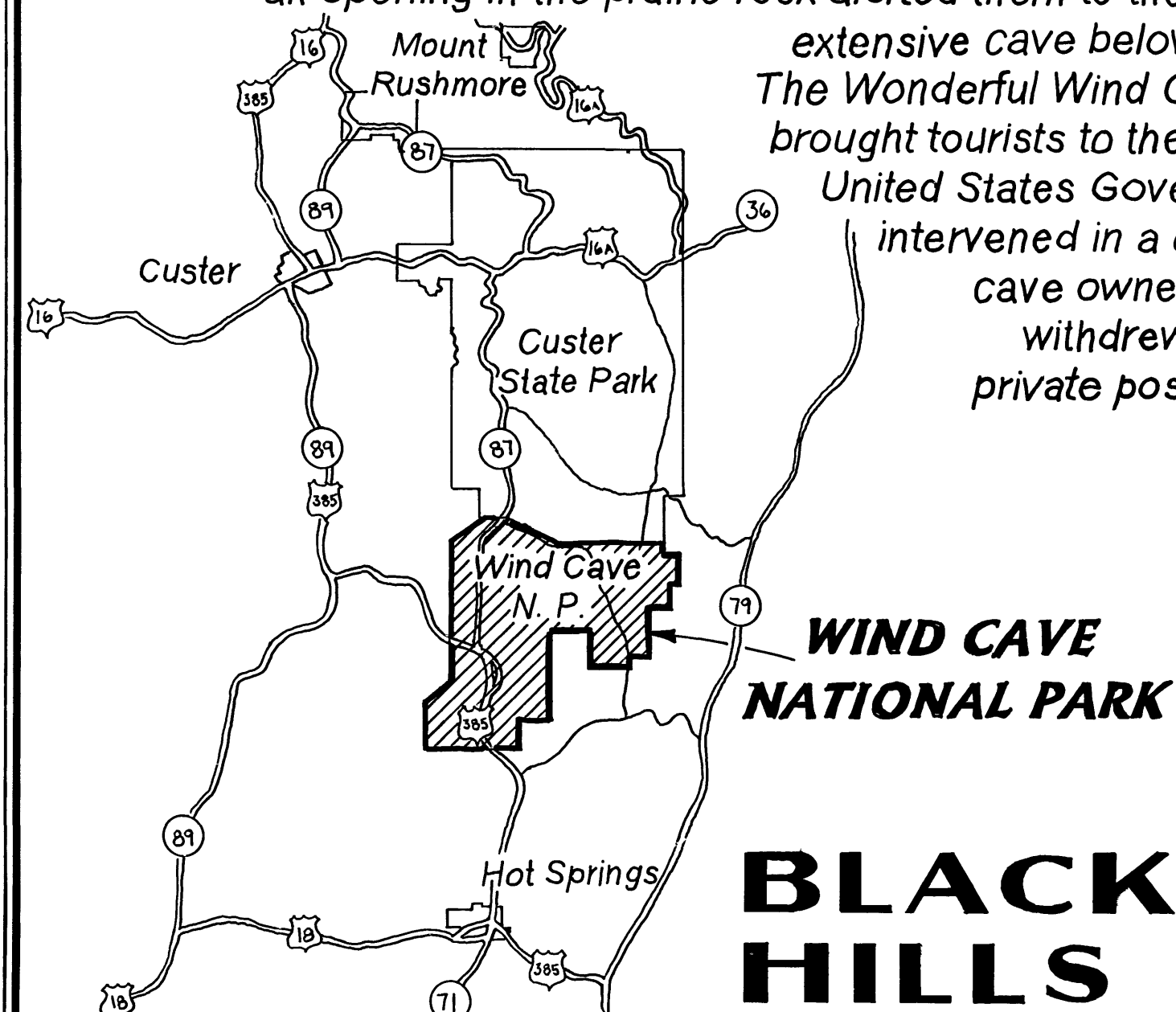
In 1903 Congress declared Wind Cave and the land above it "protected from settlement, entry, sale, or other disposal and set aside as a park." Located ten miles north of Hot Springs, South Dakota, at the southeastern edge of the Black Hills, Wind Cave National Park originally encompassed only 16 1/4 of its current 44 square miles of prairie uplands interspersed with forested ridges. While the park is named for its extensive cave system, 90 miles of explored cave make up only an estimated 5% of its total area.

The above-ground topography, flora and fauna, including bison, pronghorn, and prairie dogs, have long attracted visitors to the park.

The development of Wind Cave National Park and its road system has figured prominently in the evolution of Black Hills motor tourism. As the park has grown, original dirt paths and temporary bridges painstakingly maintained through meager park appropriations have developed into a modern circulation system funded primarily through major state and federal road projects. These projects included the construction of the Beaver Creek Bridge and the Pigtail Bridge, two unusual and historic bridges originating in the 1920s era development of scenic Black Hills highways. Today, the historic and scenic roads and bridges of Wind Cave National Park offer visitors unique opportunities to experience the pristine prairie and rocky foothills that existed long before the development of motor tourism.

Although the unexplored Wind Cave was long known to local Native Americans, Jesse and Tom Bingham officially discovered the site in 1881 when a steady stream of air blowing in and out of an opening in the prairie rock alerted them to the presence of the extensive cave below.

The Wonderful Wind Cave Company brought tourists to the cave until the United States Government intervened in a dispute over cave ownership and withdrew the site from private possession in 1899.



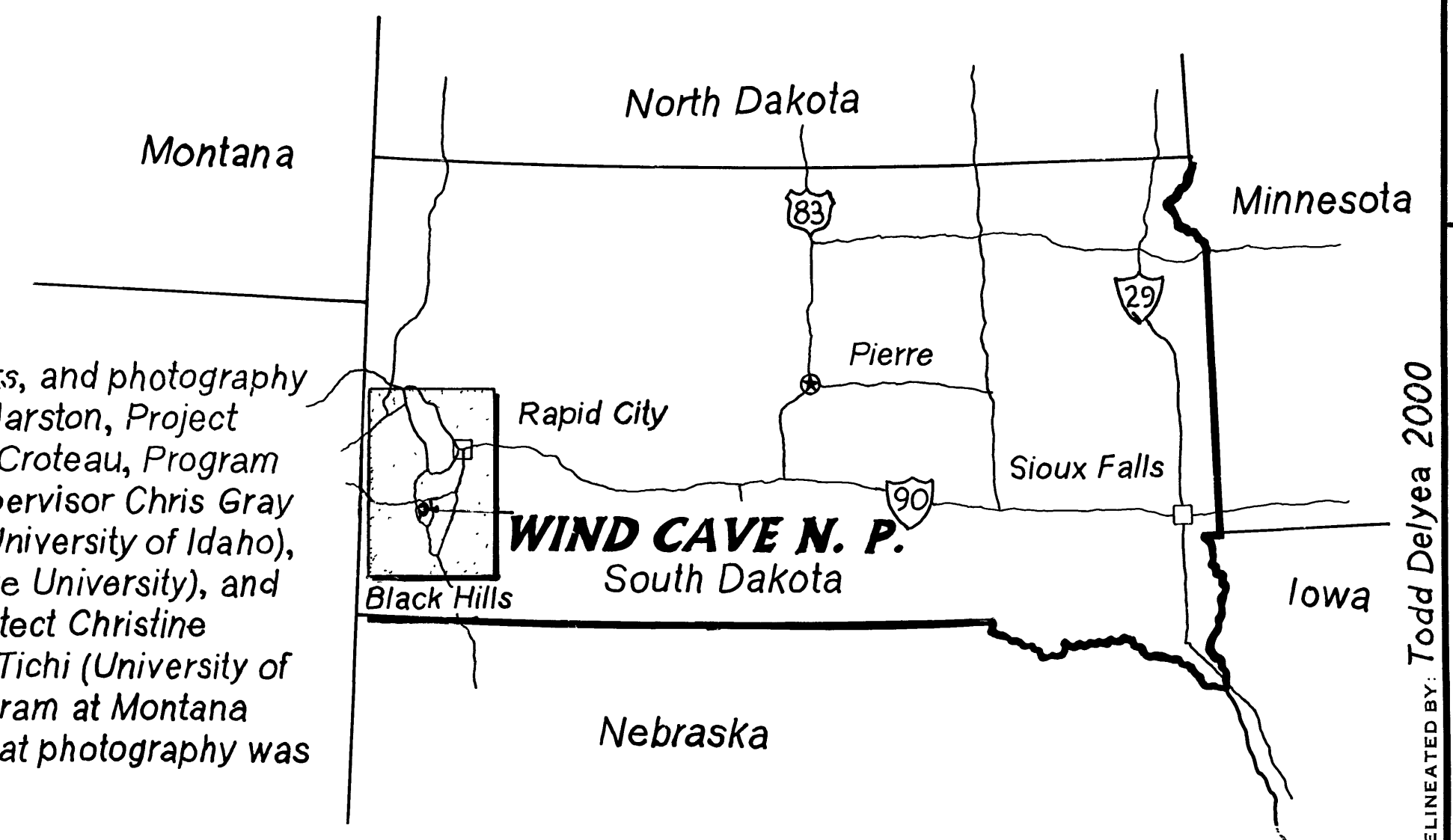
The Wind Cave Roads and Bridges Recording Project was undertaken during the summer of 2000 and is part of the Historic American Engineering Record (HAER), a long-range program to document historically significant engineering and industrial works in the United States. HAER (Eric DeLony, Chief) is administered by the Historic American Buildings Survey/Historic American Engineering Record (E. Blaine Cliver, Chief), a division of the National Park Service, U.S. Department of the Interior. The project was funded by the U.S. Department of Transportation's Federal Lands Highway Program (Art Hamilton, Administrator) through the NPS Park Roads and Parkways Program (Lou DeLorme, Manager) and cosponsored by Wind Cave National Park (Linda Stoll, Superintendent).

The field work, measured drawings, historical reports, and photography were completed under the direction of Christopher Marston, Project Leader; Tim Davis, Program Historian; and Todd A. Croteau, Program Manager. The recording team consisted of Field Supervisor Chris Gray (Texas A & M University); Architects Todd Delyea (University of Idaho), Tim Grinstead and Stacey Heckaman (Montana State University), and Roger Michel (US/ICOMOS, Haiti); Landscape Architect Christine Magdalenos (Ball State University); Historian Claire Tichi (University of California-Berkeley) and the NPS Cooperative Program at Montana State University (Barry Sulam, Manager). Large-format photography was produced by David Haas.

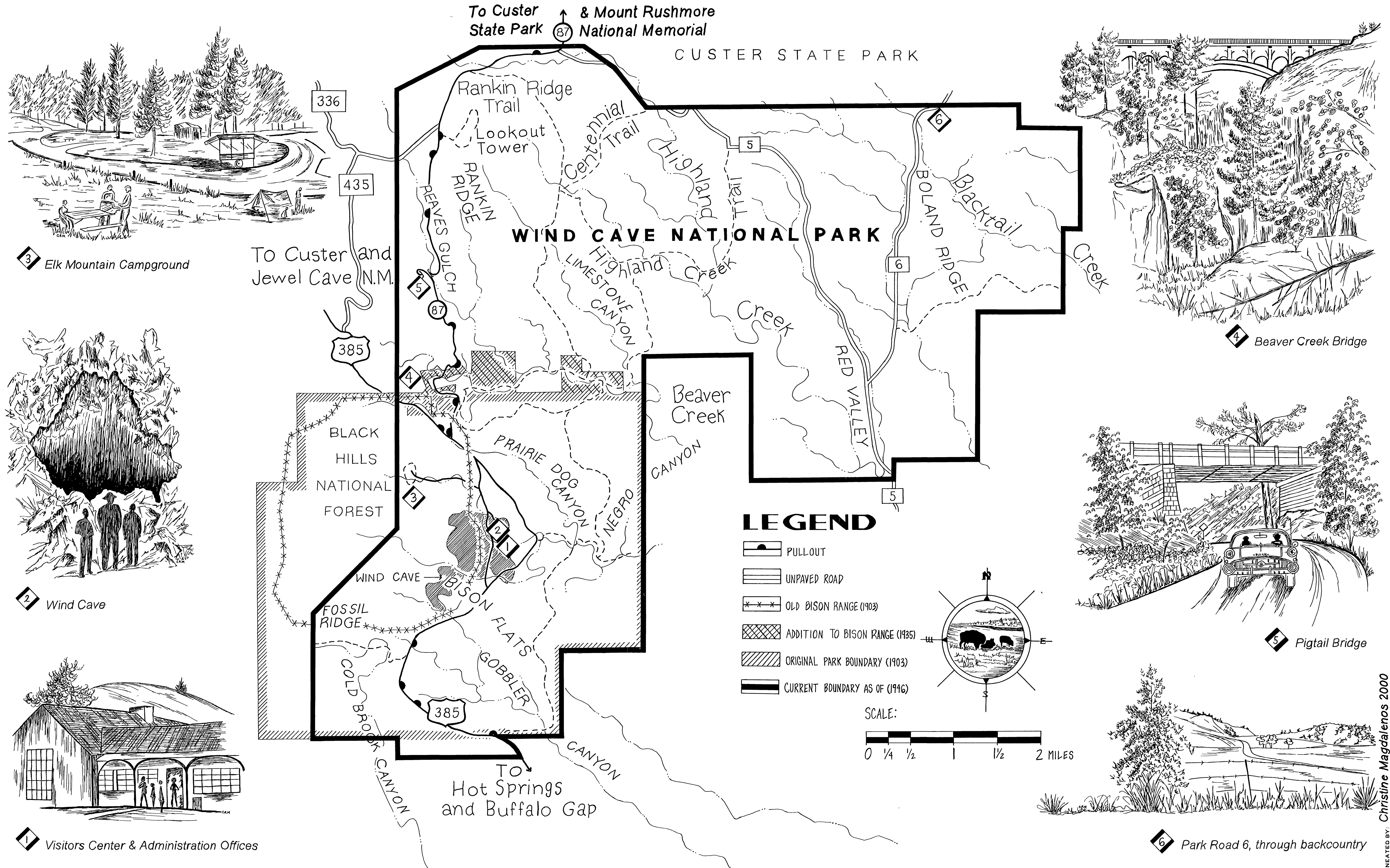
Four years later, a strong local and congressional lobby won the site National Park status. In 1913 Wind Cave received its first game herd, transforming the park into a wildlife attraction.

The development of motor tourism in the Black Hills and environs soon placed a strain on Wind Cave roads. In 1924, Congress allotted Wind Cave sufficient funds to allow the Bureau of Public Roads (BPR) to initiate much-needed road repairs and construction. After that, in 1929 the South Dakota State Highway Commission, under the leadership of Senator Peter Norbeck, expanded South Dakota Highway 81 north, linking Wind Cave and Custer State Park. During the Depression, the BPR transferred administration of road maintenance to Wind Cave National Park, and Civilian Conservation Corps (CCC) workers further developed the road and the new administrative area according to rustic National Park landscaping standards.

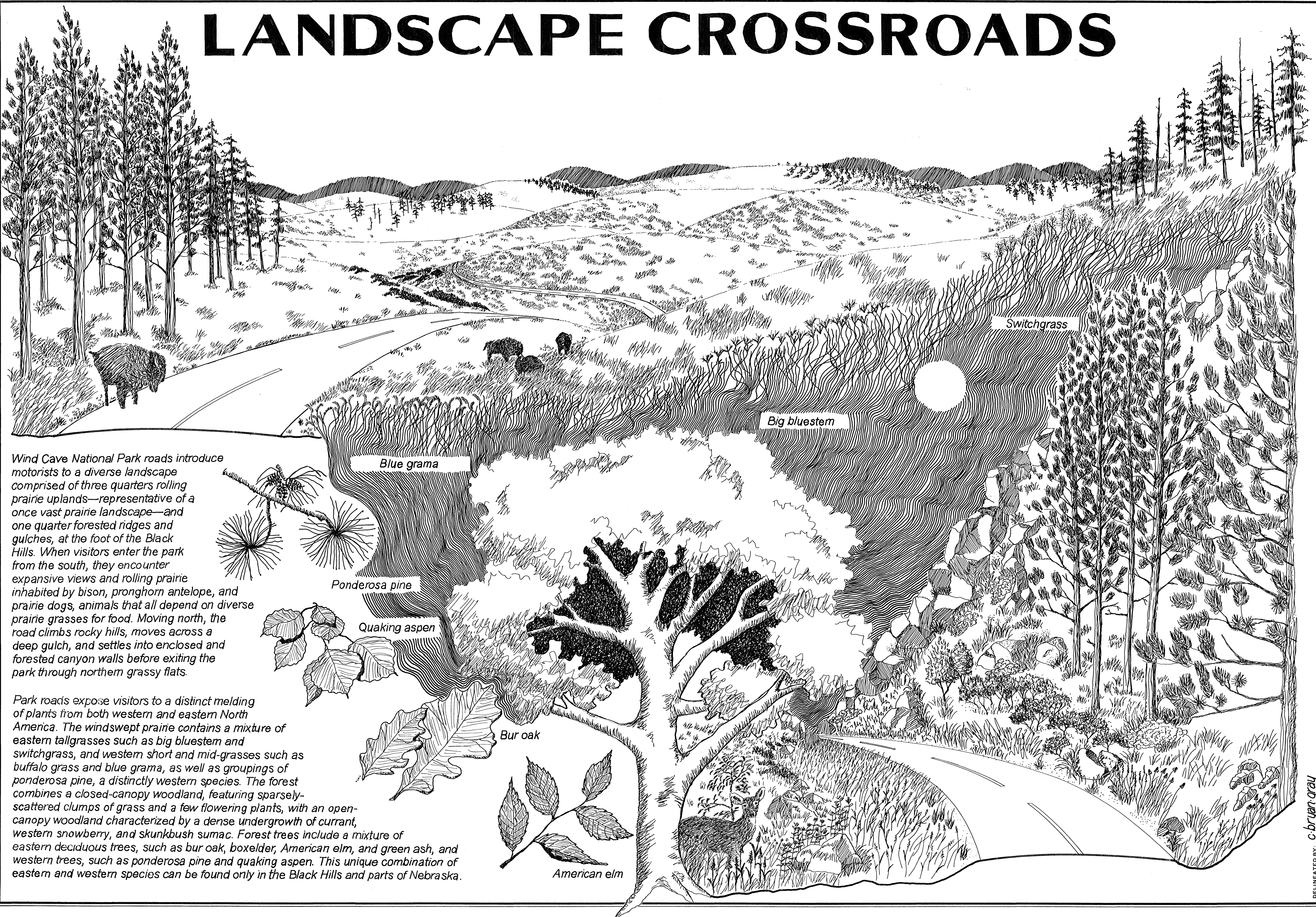
Wind Cave growth slowed until 1946, when the park boundaries were doubled. The North Entrance Road, funded by Congress and administered by the BPR in conjunction with the National Park Service (NPS), opened in 1956. This project established Highway 87 as a modern, all-weather connection between Wind Cave and Custer State Park. It anticipated the extensive rehabilitation effort known as Mission 66, launched by the NPS in an attempt to manage the post-WWII boom in motor tourism and park visitation. By 1967, Wind Cave National Park boasted a new campground, an expanded visitor center parking area, and a reconstructed highway that featured a series of roadside parking and exhibition areas equipped to encourage park circulation, manage traffic, and educate motorists about park ecology.



WIND CAVE SITE MAP

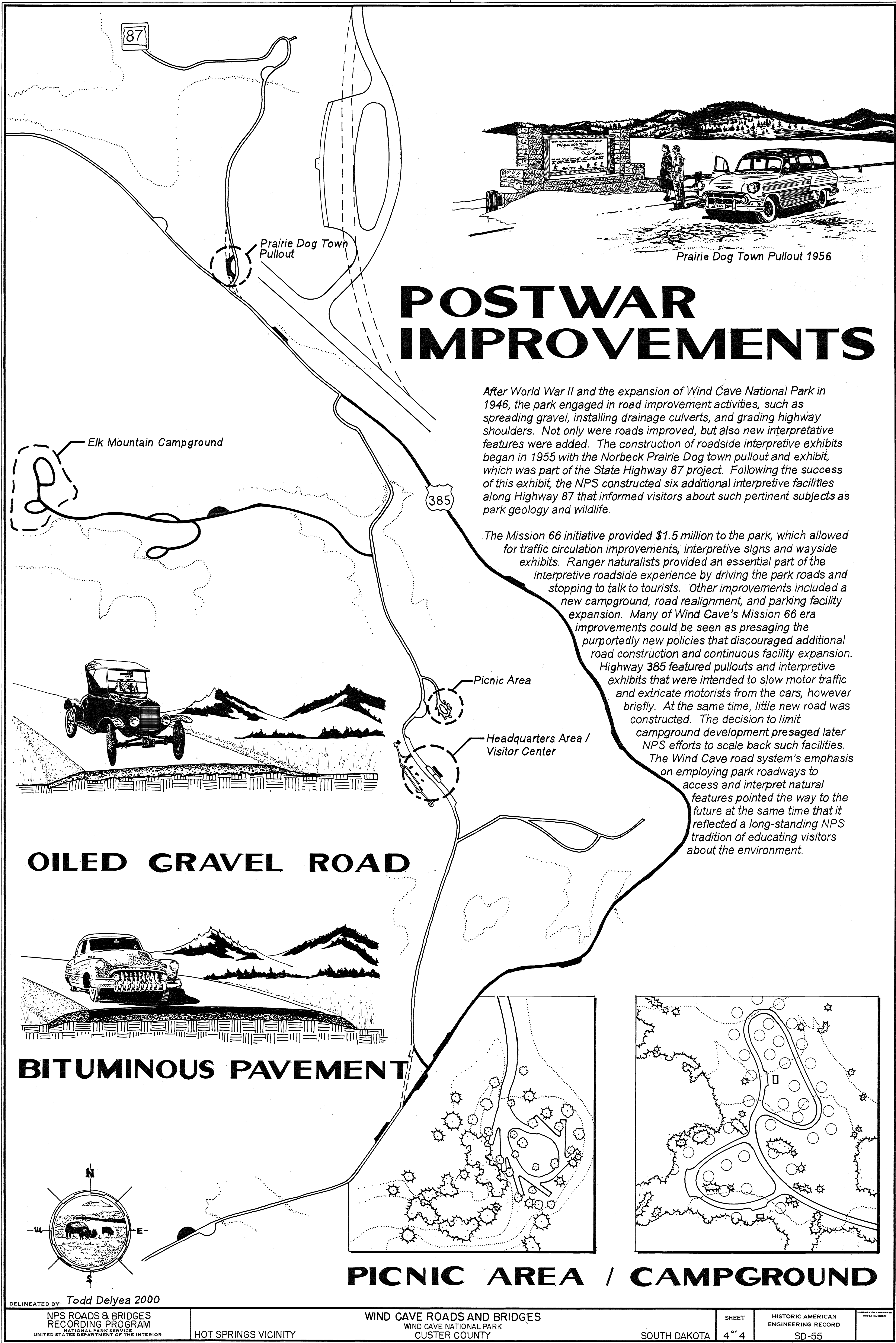


LANDSCAPE CROSSROADS



Wind Cave National Park roads introduce motorists to a diverse landscape comprised of three quarters rolling prairie uplands—representative of a once vast prairie landscape—and one quarter forested ridges and gulches, at the foot of the Black Hills. When visitors enter the park from the south, they encounter expansive views and rolling prairie inhabited by bison, pronghorn antelope, and prairie dogs, animals that all depend on diverse prairie grasses for food. Moving north, the road climbs rocky hills, moves across a deep gulch, and settles into enclosed and forested canyon walls before exiting the park through northern grassy flats.

Park roads expose visitors to a distinct melding of plants from both western and eastern North America. The windswept prairie contains a mixture of eastern tallgrasses such as big bluestem and switchgrass, and western short and mid-grasses such as buffalo grass and blue grama, as well as groupings of ponderosa pine, a distinctly western species. The forest combines a closed-canopy woodland, featuring sparsely-scattered clumps of grass and a few flowering plants, with an open-canopy woodland characterized by a dense undergrowth of currant, western snowberry, and skunkbush sumac. Forest trees include a mixture of eastern deciduous trees, such as bur oak, boxelder, American elm, and green ash, and western trees, such as ponderosa pine and quaking aspen. This unique combination of eastern and western species can be found only in the Black Hills and parts of Nebraska.



HISTORIC AMERICAN ENGINEERING RECORD

INDEX TO PHOTOGRAPHS

WIND CAVE ROADS AND BRIDGES

HAER No. SD-55

Wind Cave National Park
Hot Springs Vicinity
Custer County
South Dakota

INDEX TO BLACK AND WHITE PHOTOGRAPHS

David W. Haas, Photographer, May 2000

- | | |
|----------|--|
| SD-55-1 | ROUTE 385, ROAD ALIGNMENT NEAR SOUTHERN ENTRANCE. VIEW W. |
| SD-55-2 | ROUTE 385, PULLOUT, DOUBLE MOUNTED PARK INFORMATION SIGNS. VIEW NE. |
| SD-55-3 | ROUTE 385, VISITOR CENTER ENTRANCE SIGN. VIEW NE. |
| SD-55-4 | VISITOR CENTER PARKING LOT. VIEW NW. |
| SD-55-5 | VISITOR CENTER HEADQUARTERS BUILDING. VIEW N. |
| SD-55-6 | VISITOR CENTER, CCC FOOTBRIDGE TO WIND CAVE NATURAL ENTRANCE. VIEW NW. |
| SD-55-7 | VISITOR CENTER, CCC FOOTBRIDGE TO WIND CAVE NATURAL ENTRANCE, DETAIL. VIEW SE. |
| SD-55-8 | WIND CAVE NATURAL ENTRANCE WITH SIGN. VIEW NW. |
| SD-55-9 | WIND CAVE NATURAL ENTRANCE, FROM ABOVE. VIEW W. |
| SD-55-10 | WIND CAVE ELEVATOR BUILDING, REAR VIEW. VIEW NW. |
| SD-55-11 | WIND CAVE ELEVATOR BUILDING, SIDE VIEW. VIEW SE. |
| SD-55-12 | FOOTPATH FROM ELEVATOR BUILDING TO VISITOR CENTER. VIEW NW. |

WIND CAVE ROADS AND BRIDGES
HAER No. SD-55
INDEX TO PHOTOGRAPHS
(Page 2)

SD-55-13	CCC BUNKHOUSE, BEHIND ELEVATOR BUILDING. VIEW NE.
SD-55-14	RANGER RESIDENCE, ACROSS FROM VISITOR CENTER. VIEW SW.
SD-55-15	CCC ROCK WALL, AT VISITOR CENTER. VIEW NW.
SD-55-16	MAINTENANCE COMPLEX, WITH SEWAGE POND AND ROUTE 385. VIEW W.
SD-55-17	PICNIC AREA NEAR VISITOR CENTER. VIEW NW.
SD-55-18	INTERSECTION OF VISITOR CENTER AND ELK MOUNTAIN CAMPGROUND ROADS. VIEW NE.
SD-55-19	ELK MOUNTAIN CAMPGROUND. VIEW E.
SD-55-20	ROUTE 87, ROAD ALIGNMENT JUST NORTH OF ROUTE 385. VIEW N.
SD-55-21	ROUTE 87, LARGE CONCRETE CULVERT. VIEW E.
SD-55-22	ROUTE 87, CCC ROCK CULVERT AT BEAVER CREEK BRIDGE. VIEW SE.
SD-55-23	ROUTE 87, OVERVIEW OF PULLOUT NORTH OF BEAVER CREEK BRIDGE. VIEW NE.
SD-55-24	ROUTE 87, ROAD ALIGNMENT NORTH OF PIGTAIL BRIDGE. VIEW SW.
SD-55-25	ROUTE 87, SMALL CONCRETE CULVERT. VIEW SW.
SD-55-26	ROUTE 87, WOODEN POSTS AND CURBING AT PULLOUT BELOW FIRETOWER. VIEW SW.
SD-55-27	ROUTE 87, ROAD ALIGNMENT BELOW FIRETOWER. VIEW SE.
SD-55-28	GATE 14 "LEAVING WIND CAVE" SIGN AND BOUNDARY FENCE. VIEW W.

WIND CAVE ROADS AND BRIDGES
HAER No. SD-55
INDEX TO PHOTOGRAPHS
(Page 3)

SD-55-29	INSIDE GATE 14, "BUFFALO ARE DANGEROUS" SIGN AND GRAVEL ROAD ALIGNMENT. VIEW NE.
SD-55-30	ROUTE 87, DOUBLE TUBE CONCRETE BRIDGE/CULVERT, ELEVATION. VIEW SE.
SD-55-31	ROUTE 87, WIND CAVE PULLOUT SIGN WITH WOOD CURBING. VIEW NW.
SD-55-32	ROUTE 87, NORTH ENTRANCE TO WIND CAVE. VIEW SW.
SD-55-33	ROUTE 5, BOUNDARY FENCE NEAR HIGHLAND TRAIL. VIEW E.
SD-55-34	ROUTE 5, WOODEN PLANK BRIDGE. VIEW NW.
SD-55-35	ROUTE 5, ROAD ALIGNMENT VIEW AT LONE PINE. VIEW NW.
SD-55-36	ROUTE 5, ROAD ALIGNMENT WITH COTTONWOOD TREE. VIEW NW.
SD-55-37	INTERSECTION OF ROUTES 5 AND 11, ROAD ALIGNMENT. VIEW N.
SD-55-38	ROUTE 11, ROAD ALIGNMENT VIEW THROUGH VALLEY. VIEW NW.
SD-55-39	ROUTE 11, OLD HOMESTEAD ROAD CUT ALONG THE BOLAND TRAIL. VIEW SW.
SD-55-40	ROUTE 5, WIND CAVE ENTRANCE GATE #24. VIEW NW.
SD-55-41	DETAIL OF CATTLE/BUFFALO GUARD AT GATE #24. VIEW W.

INDEX TO HISTORIC PHOTOGRAPHS

All of these images are photographic copies of historic photographs. All of the original historic photographs are located at Wind Cave National Park, Hot Springs, South Dakota. The photographers are unknown.

SD-55-42	Early 1920s
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WIND CAVE ROADS AND BRIDGES
HAER No. SD-55
INDEX TO PHOTOGRAPHS
(Page 4)

FORMER HEADQUARTERS AREA. "WIND CAVE NATIONAL
PARK, HOT SPRINGS, S.D., STEVERS PHOTO 424."

- SD-55-43 1932
HIGHWAY CONSTRUCTION, BUREAU OF PUBLIC ROADS.
- SD-55-44 circa 1934
ROCK CUTTING/BANK SLOPING WITH GUARDRAILS.
- SD-55-45 circa 1934
BANK SLOPING, CIVILIAN CONSERVATION CORPS.
- SD-55-46 1934
BANK SLOPING, CIVILIAN CONSERVATION CORPS.
- SD-55-47 circa 1934
POSTCARD OF CIVILIAN CONSERVATION CORPS CAMP. "WIND
CAVE CAMP, STEVERS PHOTO #6."
- SD-55-48 circa 1934
HEADQUARTERS GUARDRAIL CONSTRUCTION, CIVILIAN
CONSERVATION CORPS.
- SD-55-49 Date unknown
ELK MOUNTAIN CAMPGROUND.
- SD-55-50 Late 1950s or early 1960s
OLD SPUR RAMP.
- SD-55-51 1959
BISON-ANTELOPE INTERPRETIVE SITE.

INDEX TO COLOR TRANSPARENCIES

All color xerographic copies were made from a duplicate color transparency.

David W. Haas, Photographer, May 2000

- SD-55-52 (CT) INTERSECTION OF VISITOR CENTER AND ELK
MOUNTAIN CAMPGROUND ROADS. VIEW NE.

WIND CAVE ROADS AND BRIDGES
HAER No. SD-55
INDEX TO PHOTOGRAPHS
(Page 5)

SD-55-53 (CT)	ROUTE 87, ROAD ALIGNMENT NORTH OF PIGTAIL BRIDGE. VIEW SW.
SD-55-54 (CT)	GRAVEL ROAD LEADING TO FIRETOWER. VIEW N.
SD-55-55 (CT)	ROUTE 5, ROAD ALIGNMENT WITH COTTONWOOD TREE. VIEW NW.
SD-55-56 (CT)	BOLAND TRAIL, ENVIRONMENTAL VIEW. VIEW N.
SD-55-57 (CT)	ROUTE 5, ENTRANCE AT GATE #24. VIEW N.

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WIND CAVE NATIONAL PARK

ESTABLISHED IN 1901, THIS NATIONAL PARK WAS THE FIRST TO PROTECT A CAVE SYSTEM. WIND CAVE, ONE OF THE LARGEST IN THE WORLD, IS KNOWN FOR ITS COMPLEX PASS OF PASSAGES AND A CAVE FORMATION CALLED SPOONHORN. THE PARK INCLUDES BEAUTIFUL SCENES OF WINDY GRASSY PLAINS, AND THROUGHOUT THE VISIT, CONSIDERABLE WILDLIFE INCLUDING BISON, PRONGHORNS, CRANES, WILD GOSE, EAGLES, AND PRARIE DOGS CAN BE SEEN IN THE PARK.

PARK INFORMATION, EXHIBITS AND CAVE TOURS ARE AVAILABLE AT THE VISITOR CENTER. OPEN YEAR-ROUND TO ONE OF SEVEN DAY VISITING NATIONAL PARKS.

RETURN OF THE BISON

"HOMES OF THE WINDY GRASSY PLAINS, THE PARKS OF WINDY GRASSY PLAINS, ESTABLISHED IN 1901, WAS THE FIRST NATIONAL PARK TO PROTECT A CAVE SYSTEM. WIND CAVE, ONE OF THE LARGEST IN THE WORLD, IS KNOWN FOR ITS COMPLEX PASS OF PASSAGES AND A CAVE FORMATION CALLED SPOONHORN. THE PARK INCLUDES BEAUTIFUL SCENES OF WINDY GRASSY PLAINS, AND THROUGHOUT THE VISIT, CONSIDERABLE WILDLIFE INCLUDING BISON, PRONGHORNS, CRANES, WILD GOSE, EAGLES, AND PRARIE DOGS CAN BE SEEN IN THE PARK.

PARK INFORMATION, EXHIBITS AND CAVE TOURS ARE AVAILABLE AT THE VISITOR CENTER. OPEN YEAR-ROUND TO ONE OF SEVEN DAY VISITING NATIONAL PARKS.





17-5-53-1





1922 N. 54. 55. 6



WIND CAVE NATURAL ENTRANCE

THE SMALL HOLE BELOW MARKS THE SITE OF THE ORIGINAL CAVE OPENING, DISCOVERED BY TOM BINGHAM IN 1891. A WHISTLING SOUND AND WAVING GRASSES AND BUSHES NEARBY ATTRACTED HIS ATTENTION AS HE PASSED BY.

CHANGING ATMOSPHERIC PRESSURE OUTSIDE THE CAVE CAUSES THE AIR INSIDE THE CAVE TO ADJUST. WHEN THE PRESSURE OUTSIDE THE CAVE RISES, THE AIR OUTSIDE ENTERS THE CAVE THROUGH ANY OPENINGS; WHEN THE PRESSURE OUTSIDE THE CAVE FALLS, AIR LEAVES THE CAVE. CAVE AIR ADJUSTING TO THE OUTSIDE PRESSURE CAUSES THE WIND FOR WHICH THE CAVE WAS NAMED.

HARR. N. 50:53-9











41-13



H92. N. O. 50 55-14



CAMPGROUND
1/2 MILE
PICNIC AREA
500 FT







1912-13-14-15-16-17-18



HA02. No. 50-55-19







HQ28. N. 50-85-72.



HP2 N. 3. 3. 3. 23



HAZ. N. 36-55-24





HALL. N. O. 55-26



HA02.116: St-58-27

LEAVING
WIND CAVE
NATIONAL PARK



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UNSTUCK
AT LARGE

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A black and white photograph showing a dirt road that curves from the lower left towards the center of the frame. The road is flanked by tall, dry grass. In the foreground on the right, a wooden signpost holds a rectangular sign with white text on a dark background. The sign reads: "BUFFALO ARE DANGEROUS DO NOT APPROACH HUNTING AND OFF ROAD DRIVING PROHIBITED". The background features a line of trees and a forested hill under a cloudy sky. A large, dark evergreen tree stands on the left side of the road.

BUFFALO
ARE DANGEROUS
DO NOT APPROACH
HUNTING AND
OFF ROAD DRIVING
PROHIBITED

1942.10.20.00.29



WAZ 11-1-55-55







HAZ. 12.0.0.0.0.33



HAZ. N. 60.5-34



HAER. N. O. 50-55-35



HARV. N. O. 59-55-36





High School 31





119-2. 10.00.05-41



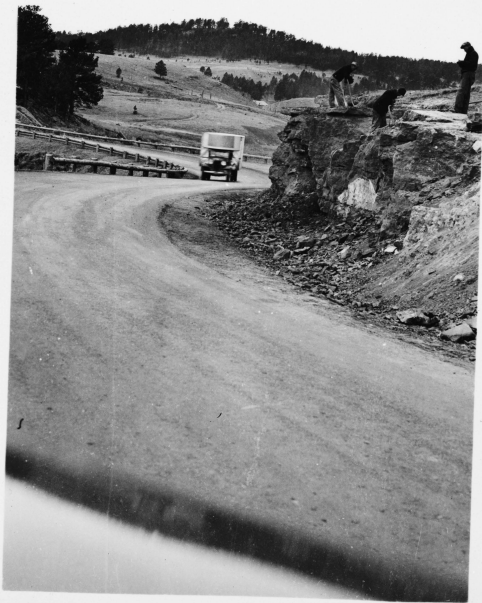
APR

74

1942. N. 50. 55. 42.



H422 No. SD-55-44



HALL AL. SD. 55-45



FILE NO. SD-55-46





WING CAVE CAMP.
Stereos Photo.
-6

WING CAVE CAMP

HAER N. SD-55-48





H92. N.O. 50. 55 - 49



HAER. 46. 22. 55-53



HAER No. 50-55-51